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THE TREATMENT OF DISRUPTIVE CLASSROOM BEHAVIOR PROBLEMS BY EMPLOYMENT OF A PARTIAL-MILIEU CONSISTENCY PROGRAM. FINAL REPORT.

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THIS STUDY ATTEMPTED TO DEVELOP AND EVALUATE A TREATMENT PROCEDURE DESIGNED TO REDUCE THE INCIDENCE OF MALADAPTIVE BEHAVIORS IN PUBLIC SCHOOL CLASSROOMS. THE TREATMENT PROCEDURE ATTEMPTED TO PROVIDE ENVIRONMENTAL CONSISTENCY IN THE CHILD'S ENVIRONMENT. IT WAS HYPOTHESIZED THAT GIVEN A PROGRAM OF HOME-SCHOOL CONSISTENCY, UNYIELDING FOR COMPLIANCE AS WELL AS NON-COMPLIANCE, THE MALADAPTIVE CHILD WOULD LEARN TO FUNCTION WITHIN REASONABLE SOCIAL LIMITS AND SHOW A REDUCTION OF MALADAPTIVE BEHAVIORS. SUBJECTS WERE 15 BOYS IN GRADES 7, 8, AND 9, WHO WERE NAMED BY ADMINISTRATORS AND COUNSELORS AS HAVING SEVERE BEHAVIOR PROBLEMS. TREATMENT CONSISTED OF INVESTIGATOR-WRITTEN "PROGRAMS" WHICH SCHEDULED THE LIVES OF THE SUBJECTS. BEHAVIOR EXPECTATIONS AND RIGID STRUCTURE WERE BUILT INTO THE LIFE SCHEDULE, WITH CONSEQUENCES FOR CONTINUED DEVIANCE AND COMPLIANCE. PARENTS AND TEACHERS RECEIVED INSTRUCTION IN THE USE OF THE PROGRAM. SUBJECTS WERE EVALUATED, TREATED FOR 11 WEEKS, EVALUATED, LEFT ALONE FOR FIVE WEEKS, AND EVALUATED A FINAL TIME. HYPOTHESES REGARDING BEHAVIOR, TEST RESULTS, AND GRADES WERE TESTED. SIGNIFICANT BEHAVIOR CHANGE OCCURRED PRIOR TO TREATMENT AND CONTINUED. THIS IS EXPLAINED AS THE CONSEQUENCE OF A CONTINUED HAWTHORNE EFFECT. ANALYSIS OF WHY TREATMENT WAS NOT EFFECTIVE IS GIVEN. FUTURE WORK IN THIS AREA MUST INCLUDE CONTROLS FOR THE HAWTHORNE EFFECT. (SK)

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Final Report

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THE TREATMENT OF DISRUPTIVE CLASSROOM BEHAVIOR PROBLEMS BY EMPLOYMENT OF A PARTIAL-MILIEU CONSISTENCY PROGRAM

Chapter 1

STATEMENT OF THE PROBLEM AND OBJECTIVES OF THE STUDY

Statement of the Problem

The incidence of emotional disturbance in the public school population is high. Bower (1958) found approximately ten per cent of California school children in grades four, five, and six to be "moderately to severely maladjusted." Wall (1955) summarized eight investigations in which the incidence of "seriously emotionally disturbed children" in school ranged from four to twelve per cent. Ullman (1952) conducted a national survey of ninth grade pupils in which he found eight per cent to be "seriously maladjusted." A 1956 study by the Department of Psychiatry at Columbia University (1957) indicated that an estimated ten per cent of public school children in the United States are emotionally disturbed to the extent that they need special attention and guidance.

Childhood mental illness statistics would be less important were effective and efficient treatment methods, facilities, and personnel available. Attempts at child psychotherapy have been varied. They include group psychotherapy (Gersten, 1951; Gersten, 1952; Gildea, 1959; Koenig, 1949; Lippman, 1962; Speers, 1964), traditional child analysis (Freud, 1950), individual and group play therapy (Allan, 1942; Bender, 1941; Fleming & Snyder, 1947; Lerner, 1956; Solomon, 1938; Traill, 1945), special "isolation" therapy (Charney, 1963), psycho- and socio-drama (Borden, 1940, Horwitz, 1945), operant conditioning techniques (Rachman, 1962), day-care centers (Lavietes, 1962; Pfautz, 1962), chemotherapy of various types (Cytryn, 1960; Effron & Freedman, 1953; Garfield, 1962; Hunt, 1956), and even the use of a canine therapist (Levinson, 1962).

However, Levitt's (1957) survey of reports of child psychotherapy effects "failed to support the view that psychotherapy with 'neurotic' children is effective" (p. 195). Using Eysenck's methods, Levitt found that two-thirds of the cases at the close of treatment were considered "improved" while three-fourths of those at follow-up were so indicated. Non-treated controls showed the same "improvement" percentages. Hood-Williams (1960) contested Levitt's conclusions on the basis of faulty methodology, but Levitt (1960) was able to produce still more evidence for the ineffectiveness of child psychotherapy.

Phillips (1956) presented data indicating that traditional "psycho-analytic depth therapy was relatively inefficient and ineffective. Using child guidance clinic data, he contrasted "depth" therapy to a hypothetical "ideal." Those data are found in Table 1.

Phillips' data take on increased importance when his survey of United States child guidance clinics is presented (1957). From 221 questionnaires returned, fifty-two per cent were of Freudian or neo-Freudian orientation and used depth therapy procedures. Filmer-Bennett (1959) surveyed 298 outpatient child guidance clinics, from which forty per cent returned questionnaires. Seventy-five per cent indicated a psychoanalytic orientation.

TABLE 1

PHILLIPS' COMPARISON OF "IDEAL" VERSUS "DEPTH" THERAPY

	Number Applying	Number Treated	Number Clinic Refused	Number Self-Refused	Number Having 3 or More Interviews	Number Benefiting	Percentage of Those Applying Benefiting
Ideal	100	90	5	5	90	90	81%
Depth	190	45	103	42	45	21 (patient)	11.05%
						33 (therapist)	17.30%

The eight year Cambridge-Somerville project in Massachusetts (Powers and Witmer, 1951), wherein 325 children aged nine to eleven were worked with intensively by counselors and social workers, failed to reduce delinquency rates in that area. The study is of particular importance because of its use of a matched control group for comparison purposes. "It was only when the delinquency records of the treatment and control groups were compared that the inability of the study to prevent or reduce delinquency was revealed" (Witmer and Tufts, 1954, p. 31). It appears that eight years of intensive case work using traditional methods was not effective.

Even assuming current therapies to be effective, facilities and personnel are not available in sufficient quantity to treat the number of children in need of specialized help. A 1957-58 national survey (Zubin and Simson, 1959) revealed that twenty-eight or more states do not have public facilities for the diagnosis and treatment of the disturbed child. Fewer than fifty long-term residential treatment centers were available throughout the United States, and those were "almost exclusively under private auspices whose fees are generally beyond the means of a majority of families." The National Association of Mental Health and other professional agencies cite the desirable standard of one mental health clinic for every 50,000 persons in the population--one for each 100,000 is considered a minimum. At this rate, 3,500 full-time clinics would be needed in the nation; yet, as of 1960, there were only 1,300 in the United States, and about one-half of them were operating on a part-time basis. Poor geographic distribution adds further to the problem, since fifty per cent of them were in cities with populations of more than 50,000. Only three per cent of all psychiatric clinical services are in areas with populations under 2,500 (White House Conference on Children and Youth, 1960).

Personnel shortages are also apparent. As of 1962, the National Association for Mental Health estimated that there were 12,500 psychiatrists in the United States and that the ratio was one psychiatrist per 14,500 persons. Nineteen states had fewer than fifty psychiatrists each. Though the number of psychiatrists has tripled since World War II, from about 4,000 in 1946 to the presently estimated 12,500, it has been estimated that only about one-half of one per cent of the total devote themselves to child psychiatry (White House Conference, 1960). Less critical but significant shortages exist in the fields of psychiatric social work, clinical psychology, and nursing specialties.

Services and facilities are also expensive. The Texas Legislative Council estimates that a complete diagnostic work-up costs $150. It estimates that the annual expenditure for a child guidance clinic to include a psychiatrist, a clinical psychologist, and two social workers is $75,000 (Texas Legislative Council, 1962). The cost of building residential treatment facilities is also high. Estimates range from $6,000 to $10,000 per year per patient (Southern Region Education Board, 1961).

There appears to be a need, then, to develop methods which differ from traditional child treatment methods, which do not involve large expenditures of public or private funds, which do not require large numbers of professionally trained staff, which utilize existing physical facilities, and which prove to be effective in reducing the present incidence of public school emotional maladjustment.

Objectives of the Study

This study is an attempt to develop and adequately evaluate a treatment procedure designed to reduce the incidence of emotional disturbance in public school classrooms, without the employment of large sums of money or large numbers of trained specialists, and within the public school's existing facilities. For the purpose of the study, those children are considered "emotionally disturbed" whom school officials report to be manifesting disruptive and maladaptive classroom behavior.

The treatment procedure involves the supplying of a written program to parents and teachers of selected classroom behavior problem children which provides instructions concerning the introduction of consistency into the child's environment. It is hypothesized that, once given a program of home-school consistency, which does not yield and into which are built logical and unyielding consequences for compliance and noncompliance, the maladaptive child will learn to operate within reasonable social limits. Consistency is defined as the degree to which both parents and teachers adhere to the program provided them.

The general design of the study compares a group of behavior problem children who are treated with a specially constructed consistency program with that same group when not so treated. Due to the study's attempt to alter the milieu of the problem child, a traditional control group in the same milieu is not deemed to be appropriate for control purposes. The school-nominated treatment group is evaluated, left alone for five weeks, evaluated again, treated for eleven weeks, evaluated a third time, and left without treatment for five weeks, followed by a final evaluation. Three different instruments are employed: The Behavior Classification Project Behavior Check List, the Stanford Achievement Test Arithmetic and Reading subtests, and the Children's Manifest Anxiety Scale. Additional data are collected concerning grade point average and teacher-given "effort" and "conduct" marks.

The general objective of the study is to discover whether or not there are significant, stable, and positive differences in behaviors and test scores between a group of classroom behavior problem children when treated with a milieu consistency program and the same group when not so treated.

The specific objectives are to test the following hypotheses:

1. There are significant differences in frequency of behavior checks on the Behavior Classification Project Behavior Check List between students when treated with a milieu consistency program and the same students when not so treated.
2. There are significant differences in frequency of behaviors checked on the Behavior Classification Project Behavior Check List between post-treatment checks and follow-up treatment checks with the same group of students.
3. There are significant differences in frequency of behaviors checked on the Behavior Classification Project Behavior Check List between pre-treatment-post-control checks and follow-up checks with the same group of students.
4. There are significant differences in frequency of behaviors checked on the Behavior Classification Project Behavior Check

Achievement Test Average Arithmetic subtest between pre-treatment-post-control testing and follow-up testing with the same group of students.

12. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between pre-control and post-control tests with the same group of students.
13. There are significant differences in scores on the Children's Manifest Anxiety Scale between students when treated with a milieu consistency program and the same students when not so treated.
14. There are significant differences in scores on the Children's Manifest Anxiety Scale between post-treatment testing and follow-up testing with the same group of students.
15. There are significant differences in scores on the Children's Manifest Anxiety Scale between pre-treatment-post-control testing and follow-up testing with the same group of students.
16. There are significant differences in scores on the Children's Manifest Anxiety Scale between pre-control and post-control tests with the same group of students.

Additionally, the study attempts to determine if programming of the environment is feasible, whether or not the degree to which significant adults follow their programs has an effect on behavior change, and the relationship of behavior change under treatment to age and severity of the problem at the outset of the treatment procedure. Specifically the following hypotheses are tested:

17. There is significant positive relationship between experimenter-

List between pre-control and post-control checks with the same group of students.

5. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between students when treated with a milieu consistency program and the same students when not so treated.
6. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between post-treatment testing and follow-up testing with the same group of students.
7. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between pre-treatment-post-control testing and follow-up testing with the same group of students.
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9. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between students when treated with a milieu consistency program and the same students when not so treated.
10. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between post-treatment testing and follow-up testing with the same group of students.
11. There are significant differences in scores on the Stanford

ranked parental cooperation and the rank of their children in terms of treatment benefit.

18. There is a significant positive relationship between age rank of children in the study and their rank in terms of treatment benefit.

19. There is a significant positive relationship between rank of children in the study in terms of severity of problem and their rank in terms of treatment benefit.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Literature is reviewed which bears on the relationship between childhood behavioral adjustment and parental psychopathology. Additionally, the relationship between child training methods and attitudes to child behavior is examined. Finally, literature is reviewed pertaining to the theoretical bases for the study, and to the assessment instruments used in this study.

The Relationship of Parental Psychopathology to Childhood Behavioral Adjustment

The literature reviewed in this section concerns parents of children who have been diagnostically placed in a psychiatric category other than "psychotic" and/or one of the "chronic brain syndromes."

Wolff (1961) studied social and family background factors of forty-three pre-school children referred to a child guidance clinic with a "behavior disorder." He found two non-social factors: a high incidence of psychotic disturbance in the parents and a high incidence of parental childhood deprivation. Greenberg (1950) noted a large number of "threatened" mothers of behavior problem children and concluded that, "...our present knowledge would seem to indicate that the primary cause of behavior problems in children is a disturbance in the relationship between parents (or parent) and child," (p. 44). Greenberg observed a high incidence of parental rejection--especially maternal--with a concomitant tendency to overprotection, a phenomenon which he explains by use of a "reaction formation" hypothesis. Cutter and Hallowitz (1962), in reference to treatment procedures for maladjusted children, restate the "...well established and diagnostically applied theory about the child's disturbance springing from pathology in the parent(s) and breakdown in the intra- and extrafamilial relationships" (p. 152). Phillips (1951) studied fifty-two cases referred to a guidance clinic and found that parental personality disturbances were communicated to the child which usually got the child involved in similar disturbances of his own. Peterson (1959) confirmed the general theory of parental causality, but noted the increased significance of the father's psychopathology. Both Szurek (1942) and Johnson (1949) were able to find case material which supported a hypothesis that parents act out their own "amoral or antisocial" behavior through the child, obtaining some vicarious pleasure therefrom.

The disturbance in parental marital relationship was found to be a significant factor in childhood disturbance by Vogel (1960). With his small sample of nine, he found that the child usually became the parental scapegoat. Additional evidence along this line was found by McDonald (1962) who used The Interpersonal Check List (after Leary) to compare family conflict with state certified emotionally disturbed children as opposed to non-disturbed children. Despite small numbers (ten disturbed, ten "normal"), he reported that statistically significant differences were apparent in the areas of parent "self-rejection," parent "description of their children as distrustful, self-effacing and dependent," parent "disidentification with their children," and parent "devaluation of the personality of their spouses and children." Kaffman (1961) studied Israeli Kibbutz children and found that "Deviation behavior of Kibbutz children...is due in the great majority of cases to a disturbed child-parent relationship." Rosenthal (1962) studied 405 patients in the Institute of Juvenile Research by use of data processing equipment and found a higher incidence of certain emotional problems with "unwholesome" father-child relationships. Schulman (1962) used a unique playroom/structured task technique to observe parent-child interaction. He found that parents of "conduct problem" children were significantly more rejecting and hostile toward their children than were parents of "non-conduct problem" children. Chazan (1959) studied sixty British children who were behavior problems and found parental "rejection" and "lack of parental harmony" to be causative factors.

The Relationship of Parental Child Training Methods and Attitudes to Childhood Behavioral Adjustment

Literature pertaining to parent child training methods and attitudes as they relate to childhood behavior generally is more exact in that psychopathology is a diagnostic abstract not readily observable, but training methods are observable and subject to reliability checks. Radke (1946) reviewed the literature up to and including 1944, and produced the following summary table:

Type of Home	Type of Child Behavior Associated With It	Investigator
Rejective	Submissive	Newell (1936)
	Aggressive	Grant (1939), Newell (1936), Zimmerman (1931)
	Adjustment Difficulties	Witmer (1933)
	Feelings of Insecurity	Grant (1939), Newell (1934)
	Sadistic	Grant (1939)
	Nervous	Grant (1939)
	Shy, Stubborn	Gottemoller (1939)
	Noncompliant	Meyers (1944)
Overprotective, "babying"	Infantile and withdrawing	Grant (1939), Hattwick (1936), Zimmerman (1931)
	Submissive	Newell (1936), Grant (1939)
	Feelings of insecurity	Grant (1939)
	Aggressive	Zimmerman (1931)
	Jealous	Sewall (1930)
	Difficult Adjustment	Hattwick and Stowell (1936), Witmer (1933)
	Nervous	Grant (1939)
Dominating parent	Dependable, shy, submissive polite, self-conscious	Symonds (1939)
	Uncooperative, tense, bold quarrelsome, disinterested	Anderson (1940)
Submissive parent	Aggressive, careless, disobedient, independent, self-confident, forward in making friends	Symonds (1939)
	Noncompliant	Meyers (1944)
Inharmonious	Aggressive	Knight (1933), Hattwick (1936)
	Neurotic	Karlin (1930)
	Jealous	Foster (1927), Sewall (1930)
	Delinquent	Yeranian (1932), Gosset (1932, Burt (1929)
	Uncooperative	Hattwick (1936)
Defective discipline	Poor adjustment	Myers (1935), Ayer and Benreuter (1937)
	Aggressive, rebellious	Anderson (1940)

Type of Home	Type of Child Behavior Associated With It	Investigator
	Jealous	Sewall (1930)
	Delinquent	Burt (1929)
	Neurotic	Karlin (1930)
Harmonious, well-adjusted	Submissive	Knight (1923)
	Good adjustment	Hattwick and Stowell (1936)
Calm, happy, compatible	Cooperative	Hattwick (1936), Anderson (1940), Grant (1939)
	Superior adjustment	Stott (1940)
	Independent	Stott (1939)
Child accepted	Socially acceptable	Symonds (1939)
	Faces future confidently	Symonds (1939)
Parents play with child	Security feelings	Hattwick (1936)
	Self-reliant	Hattwick (1936)
Logical, scientific approach	Self-reliant	Grant (1939)
	Cooperative	Grant (1939)
	Responsible	Grant (1939)
Consistent, strict discipline	Good adjustment	Myers (1935)
Giving child responsibilities	Good adjustment	Myers (1935)
	Self-reliant	Hattwick (1936)
	Security feelings	Hattwick (1936)

Champney (1941) used the Fel's Institute Parent Behavior Rating Scales to study parent-child behavior relationships and found that the method was reliable. Shoben (1949) employed the University of Southern California Parent Attitude Survey and reported that parent attitudes are measurably consistent and that parent attitudes are meaningfully associated with child adjustment. A theoretical basis for parent attitude-child behavior studies is provided by Cameron (1963). He notes that, "Some of the most serious childhood anxieties come from the failure of parents to set limits to a child's impulsive behavior....

How is the child who has openly ambivalent and often unconsciously corrupting parents to develop consistent ego and superego attitudes himself? Early in life the significant parent...must be the main source of identification, and therefore the chief determinant of his personality structure" (p. 85). Settlage (1958) offers further theoretical support: Parents "...have difficulty setting limits for their children because they do not know where the limits are for themselves. To set a limit is to act on a value judgment; if one is not sure of what he values, then confusion, inconsistency, and ambivalence result...The child whose parents have set inadequate boundaries on his behavior is an unhappy child. He is the slave of his own impulses which require him to test every situation anew in an unending search for control."

In the same study reported above, Schulman (1962) found that parents of "non-conduct problem" children were more controlling than those of "conduct problem" children. Phillips and Johnston (1954) reviewed case materials and concluded that, "The child is at odds with significant adults, largely because these adults do not set limits for the child...From the child's point of view, he is faced with a parent who cannot maintain a stable position, wrong or right, and who cannot offer him security and safety. The child keeps pushing, seeking to delimit his areas of operation...He learns that his parents' words do not mean what they are supposed to mean, that there is always a way of getting around them on an impulse of the moment. But the child is also made anxious by the indefiniteness and the insecurity of the relationship." Frankiel (1959) found support for Phillips' clinical impressions in a review of "Research on Parent Influences on Child Personality." She concluded, "By and large these studies find that firm consistent discipline, the rewarding of good behavior, and affection from parents have positive effects."

Goldfarb described a syndrome of "parental perplexity" which he found to be associated with childhood confusion. "Perplexity" consisted of the following factors: "a striking lack of organized parental activity;" the parents are outstandingly passive and uncertain...; "a lack of parental spontaneity;" "when pressed by the bizarreness or destructive nature of the child's symptoms, the mother gives overt signs of bewilderment, often verbalized as, 'I don't know what to do,' or 'Tell me what to do.'" Goldfarb's "confused" child "reacts as though there were no controls, either inner or outer..." Newell (1934) found parental rejection to be associated with behavior problems in children but he noted that "the most frequent manifestation of rejection is inconsistency of handling."

Grant (1939) studied the factors in the home environment as they affected child behavior. He concluded that "Home environments characterized by a logical scientific approach tend to produce such types of child behavior as the following: self-reliance, responsibility, resourcefulness, and perserverance." Correlations ranged from +.45 to +.57. His "logical, scientific approach" involved the following parental behaviors: "practically and methodically teaching routines of dressing, eating, sleeping, and toileting...; relatively impartial in attitude toward the child;...utilized consistent guidance and discipline in handling the child." The two most outstanding parental characteristics Grant found were "consistency and an attempt at an understanding of causal relationships." These two characteristics correlated -.40 with "nervous habits" of the child and -.11 with "sadism" in the child. Harris (1958) reported that children reared with extreme laissez-faire procedures and in "child-centered" homes, when interviewed as adults, were prone to report feelings of restlessness, indecision, and an inability to function at fullest capacity. On the other hand, children reared in homes characterized by firmness and consistency of discipline and parental assumption of the leadership role seemed, as adults, to be more decisive, self-confident, and self-accepting.

Glueck's (1950) classic study of delinquents found that high scoring delinquents were characteristically exposed to overstrict or erratic discipline by the father, unsuitable supervision by the mother, indifference or hostility on the part of both of the parents, and an unintegrated family. Paynter (1928) analyzed factors underlying conduct disorders in 330 children brought to certain child guidance clinics. He found the primary factor (over 90% inclusion) to be "poor discipline and training" by parents. Hartogs (1951), studying the early lives of sex-delinquents and sex criminals, found a "marked inconsistency of...disciplining attitudes." Punishment was related to the temporary need of the parents and was erratic. Ninety-two per cent were beaten by parents. MacFarlane (1939) studied problem preschool children in Berkeley, California, and found a positive correlation between success of parental marriage and child adjustment. Also noted was a high correlation between parental lack of agreement on discipline and poor marital adjustment and between parental lack of agreement on discipline and behavior problems in children. Sears (1961) studied twelve year olds who had been studied as five year olds to ascertain the relationship between "early socialization experiences (and) aggression in middle childhood." He found that anti-social aggression was positively related to high permissiveness and low punishment by parents. At age five, low punishment had been related in a negative direction to anti-social aggression. Pro-social aggression was positively related to high punishment in the twelve year old group. Winder (1962) studied parental attitudes as they related to social deviance in preadolescent boys and found the parents of the deviant group to be more ambivalent, punitive, restrictive, and demanding of aggression. Becker (1962) was able to confirm his hypothesis that the degree of hostility in both parents and use of physical punishment was related to aggressive behaviors in their children. Vogel (1961) found several factors to be associated with anti-social behavior of early elementary school-age boys. They were subjected to inconsistency of discipline, felt dependent, felt little warmth from either parent, were subjected to verbal abuse and the use of concrete rewards by their parents, and lived in families with limited cohesiveness. Holman (1953) found the following factors in his study of 100 maladjusted children who manifested "considerably more aggressive symptoms" than did their controls: more only children, less "intact" homes, more illegitimacy, less satisfactory relationships between parents, more temporary separation from parents, and more parental "hostility, rejection, inconsistency and neglect." Finally, in a study of British delinquent children, Andry (1960) found that delinquents experience less open and strong love from their parents, less adequate communication with their parents (especially fathers), a more tense home environment, and less adequate parental training (especially from fathers). Deviant behaviors of delinquents are less known to their parents and less adequately dealt with by them. The latter two studies are given considerable weight due to their inclusion of matched control groups.

The above literature would substantiate the relationship (probably causal) between both parental psychopathology and attitudes and child behavior. There is also substantial evidence that a major factor in childhood adjustment problems is parental inconsistency in training and discipline, whatever its cause.

Theoretical Bases for the Study

The Importance of Environment on Behavior

Probably Kurt Lewin is the leading exponent of a theory of environmental effect on behavior. Without delving into Lewin's entire theoretical formulation and topological schemata, it is possible briefly to review representative writings. Lewin notes (1939) "The mere knowledge of a thing...does not necessarily change the child's life-space more than superficially or even at all. On the other hand, psychologically critical facts of the environment...may have fundamental significance for the child's life-space without the child's having a clear intellectual appreciation of the fact." Stating it as a matter of "fundamental psychological importance" Lewin calls attention to the "direct relationship between the momentary condition of the individual and the structure of his psychological environment." In a later formulation, Lewin (1946) states that behavior is a function of the person plus his environment. He goes on to cite research which brought changes in behavior through changes in environment, noting that environment has a limiting effect on a person and, consequently, on behavior. A study by Lewin (1939) to demonstrate the efficacy of his theory was designed to manipulate experimentally the social "climate" for a given group of children. The environmental manipulation was successful in bringing about varying degrees of "hostility" (usually of the overt, acting out type) as the social climate was changed.

Lewin goes on to discuss the concepts of "induced values" and of the use of punishment. Concerning the former, he notes that the "induction may be brought about by an expressed prohibition of command. More important, however, is the effect of example, i.e., of that which the child sees characterized by the behavior of adults as positive or negative for them." Concerning punishment, Lewin states, "...if the threat of punishment is to be effective, the child must be so enclosed by a barrier that escape is possible only by way of the punishment or by doing the disagreeable task." One could easily substitute "consequence" for "punishment" in Lewin's formulation without changing the basic assumptions underlying it. Though Lewin was primarily concerned with current, even instantaneous, situations and life-space changes, he nonetheless notes the permanence of environmental influence: "...the operation of the environment always has, as a consequence, a more or less marked change in the individual, himself, and thus changes his 'basis of reaction' to all later situations" (p. 123).

A wide range of literature bearing on the effect of environment on child behavior is related to the environment as a "corrective" medium;

however, such a position carries with it the inference that the earlier environment of the child was in need of correction and had an influence on the negative behavior in need of correction.

Redl (1957, 1959) discusses the concept of "total milieu therapy" as it "ranges all the way through the supportive use of specific techniques and experiences in the child's life, to the belief that sometimes the impact of milieu ingredients in its own right may bring about a 'therapeutic move.'" Alt (1954) in his discussion of the treatment program at New York's Cedar Knolls School notes that, "The milieu, with all its healing influences and devices, reflects a gradual expansion of the clinical function to include not only concern for the individual child and his needs, but also the design and quality of the total environmental setting within which he lives..." The program of the Illinois Children's Home (1946) involves in its "psychiatric prescriptions" the home's janitors, housemaids, and recreation workers--as well as professional staff and actual parent surrogates. Hallowitz (1964) stresses the importance of teachers in the corrective milieu. Goldsmith (1963) believes that all institutional staff need to "be seen as collaborators in treatment, not just tools of a prescription-writing clinical staff." Finally, Harms (1953) summarizes, "Any child's ego from the day of his physical birth to the date of the 'birth of the ego', and from then on through the entire span of life, is socially influenced and shaped by...environmental factors."

Bandura and Walters (1963) present a non-psychoanalytic, social learning hypothesis and body of related research to account for both pro-social and deviant behavior. They attempt "...to explain the development of all forms of social behavior in terms of antecedent social stimulus events such as the behavioral characteristics of the social models to which a child has been exposed, the reinforcement contingencies of his learning history, and the methods of training that have been used to develop and modify his social behavior" (p. 44). In support of such a position, they offer their own research reports. In a 1959-60 study, they found that overtly aggressive children who had parents who punished for aggression in the home were reinforced for aggression outside of the home (p. 18). Bandura and Walters account for some learned behavior patterns via the "role of imitation"--or the effects of "the presentation of parent and other models" for behavior. They review their own research and that of others which has bearing on direct imitation, identification with significant others, and role-playing. However, they note that, ..."once imitative responses occur, the consequences to the agent will largely determine whether these responses are strengthened, weakened, or inhibited. Direct training through reward, aversive stimulation, and other disciplinary procedures undoubtedly plays a large part in shaping and in maintaining patterns of social behavior" (p. 108). Research is cited to refute the old-line frustration-aggression hypothesis. Davitz' (p. 135) study with elementary age school children, in which all children were frustrated after being trained to use frustration in varying ways, was used to demonstrate that frustration need not lead to aggression in children; rather, prior learning was more important to the child's reaction to a frustrating situation. Those children rewarded for constructive and cooperative behavior were able to respond constructively under experimental frustration conditions, while those children trained to make "competitive and aggressive responses" reacted more aggressively to frustration.

Concerning themselves with "self-control" or the lack of same, Bandura and Walters describe three forms: "resistance to deviation, the regulation of self-administered rewarding resources, and the postponement of immediate reinforcements in favor of some potentially more highly valued delayed reward" (p. 22). The differential attainment of self-control is accounted for by reference to the "consequence of differential modeling cues and differential patterns of reinforcement... Persistent antisocial behavior appears to result from intermittent positive reinforcement..." (p. 222-223). Stressed is tho social environment in which the reinforcement takes place. Finally, Bandura and Walters call upon the "professionally qualified clinician...to develop effective therapeutic procedures based on social-learning principles, to train available persons in the application of these principles, and set up programs which these persons may implement under his guidance and direction. In this way more people would receive help than they do under current professional practices" (p. 258-259).

There is some support for the above position in past and on-going treatment attempts. Meller (1964) sees school "peers" as "therapeutic agents" in the treatment of childhood schizophrenia. He notes that, "the school community offers an advantage over a clinic in that (it) can involve not only mental health workers with the child and his family, but can extend the therapeutic environment to teachers and classmates, that is, to the total environment of the disturbed child." Zubin (1959) states that, "Those settings that integrate school and social experiences with individual treatment...appear to provide the most adequate program for a large number of seriously disturbed youngsters." Miller (1965) advocates working with significant adults in the lives of behavior disorder patients. Noting that, "Too often workers are inclined to substitute extensive dynamic formulations of childhood ...largely speculative, for a clear description of the client as he is, of how he came, and of why he wants treatment" (p. 66), he notes a need for limits and controls on a twenty-four hour a day basis and observes that others in the life space also need some help.

Irgens (1936) reported that in order for a disturbed child to improve (usually regardless of the severity of the disorder) the parents must be treated either "moderately," meaning "education," or "intensively," meaning "insight or attitude therapy." Dawley (1939) also provides support for the need to include parents in the therapy process for children in need of treatment. Reidy (1962) described a state program which involved not only the family, but the community, in the child's treatment after he left a state institution, and Hollister (1962) stresses the need for school-home coordination in working with emotionally handicapped children. Kahn (1963) argues against the use of special and separate classes for disturbed children, despite some professional disagreement (Bentzen, 1962; Bisgyer, 1964). Kahn notes that, "...if the concern were only the child's having trouble, special schools or classes would not be developed. If capable of continuing in the community (rather than requiring institutionalization) such pupils would remain in regular schools." She is aware that some students are "too disturbing to the vast majority" and sees this factor as the central one in providing segregated facilities. Using New York City and its "600 schools" as the backdrop for study, Kahn presents a general thesis for "interdependent" community services to provide help for the disturbed, sometimes delinquent, child. Krugman summarizes the available literature as follows (1958, p. x-xi):

> One can find support for the thesis that the functions of the psychiatrist in schools is to diagnose and treat disturbed children as well as for the position that the only functions of psychiatrists in schools are consultation and mental health education for teachers; that child guidance clinics should be integral parts of the school system, and that they should by no means be integral parts;...that teachers are poor diagnosticians, and that teachers are superior diagnosticians;...that disturbed children should be educated and treated in special classes, and that disturbed children should...be educated in regular classes.

The Importance of Structure, Discipline, Consistency and Control

Hutt (1947) sees consistency of response from "significant others" as essential to "value interiorization." He notes that, "Irregularity in the behavior to which the child is exposed is very disruptive. If the rules of life are unpredictable, he cannot develop any successful techniques for adjusting to people... The child becomes secure when attitudes are expressed by others...in a consistent manner" (p. 33). Eisenberg (1953) concurs with Hutt: "Studies have indicated the far-reaching consequences of emotional deprivation in the formative years on all facets of development. But 'love' alone is not enough. Stability and consistency...are also essential." Even Bettelheim (1950) indicates that permissiveness cannot be total since the child needs support and protection from some externally imposed limits.

Giuott (1964) stresses the need for controls and limits in child play therapy. The following reasons are offered: assurance of the physical safety of the child and the therapist; strengthening of the child's self-controls and self-regulation; and providing a set for reasons of law, ethics, and social acceptability. Bixler (1964) advocates "rigid," but few, limits in child play therapy. Such limits provide a "clear line of demarcation" for the child so that he will be better able to live within the limits in the real life environment that are always there. Hacker (1945) notes that the allowing of an unlimited expression of id creates anxiety. Alt (1960) again taking cases from the residential treatment setting, states that, "...the child's first need is for protection against his own impulses and for the sense of control which the structure of the institution and the routines of orderly living give him. While many of these children may initially struggle against them, their relief when the limits are finally imposed is clearly evident." Alt calls for the "stability of the environment" as well as "routinization" of the milieu. Additionally, he sees a need for classroom order in such a way as to provide control of the child. Newman (1961), based on her observations at the National Institute for Mental Health School, states that there is a need for a "predictable environment--a child can handle school because the school can handle the child." Newman calls for a "defined structure" in the classroom. Greenberg (1950) notes that "...experienced psychiatrists and psychologists have learned that the limitations of children's activities by adults is a necessary part of the child's development...the therapist who permits a child to carry on wild, unrestrained behavior...will soon have a very anxious, frightened child on his hands...Children require limitations and help in controlling and channeling their impulses."

Settlage (1958) believes that "there is no such thing as freedom without limits." He offers rules for the imposition of limits by parents: (a) the limit must be based on a sound value judgment; (b) the limit once set must be adhered to firmly; (c) the child should be encouraged to seek and work out his own solution to the problem which the limit poses for him; (d) the parent must give understanding and guidance, and help the child to find alternative behavior patterns. He adds, "At times appropriate punishment may be needed to convince the child who fails to comply that the limit indeed is a limit." Devereux (1956) differentiates between punishment and discipline: "...Discipline --as a means of mediating objective reality--leads to self-discipline, through insight and mastery of reality. Punishment, because it mediates only the 'charismatic power' of the punisher...can lead only to constriction..." (p. 209). Devereux believes that punishment is a method of "acting out" for the punisher. He also reviews anthropological literature which appeared to indicate that permissive and lenient parents of some cultures produced children who were not behavior problems. He makes a point, however, that our social situation (culture) requires more discipline, and less leniency, per se to produce the non-behavior problem child.

Gottesfeld (1965) developed a questionnaire which had on it all the techniques reported to be in use in therapy with New York City delinquents. The questionnaire was administered to a large sample of New York youth and clinical workers, less than twenty "experts" in the field of youth delinquency, and as many city delinquents as could be found.

Considerable disagreement occurred between professional and delinquent about the role of the professional. The worker saw his ideal posture as one of being warm, accepting, non-judgmental, and a sort of "pal." The youths wanted "a mature adult who is concerned about (them), respects (them), teaches (them) to relate better socially, and helps (them) to take (their) place in the world" (p. 58). They wanted direction, advice, and authoritative stand-taking. Leventhal and Sills (1963) theoretically agree with Gottesfeld's findings. They see therapy with "character problem adolescents" as a "learning experience." The therapist must be honest and frank, insisting on certain appropriate behaviors. And DuBois (1952) is concerned about the importance of routine as it relates to a child's feeling of security. DuBois feels that "only complete rejection disturbs a child's security more than a lack of consistency."

Phillips (1961) suggests the "possibility of a single-variable, two-choice framework for treating behavior problems in children." The procedure is based on the assumption that "conflict within and between persons is treated by means of logical analysis of the steps needed for solution, with emphasis on overt behavioral considerations rather than on cognitive structure, unconscious, or other motivation or personality traits and characteristics" (p. 705). He offers eight "basic propositions" which are as follows:

> a. Any disorder represents a lack of structure, a lack of relationship between what is anticipated and what is observed, in behavior;
> b. More precisely, disorder is associated with a discrepancy between the theoretically anticipated (or desired) and the empirically observed;
> c. Behavior is assumed to follow a circular, not a linear, type of 'causality,' where any aspects of the feedback orbit may be linked to any other aspect, through a chain of events;

d. Psychotherapy consists of a variety of techniques useful in decreasing the discrepancy between what is anticipated and what is observed;

e. All treatment is, by definition, operational, i.e., observable events forming a discrepancy become the focus of treatment, not hypothetical "inner" events or states;

f. Therapeutic improvement is any statistically or practically significant change in one or more of the following: (a) decreasing frequency of discrepancies; (b) decreasing intensity or duration of discrepancies; (c) quicker recovery from results of any discrepancies which do occur and have an "upsetting" effect;

g. The seriousness of a pathological problem is directly related to the number of decisions and actions needed to overcome the discrepancies;

h. The usefulness of any psychological tests or techniques is to identify and locate discrepancies.

Phillips' treatment procedure involves the breaking down of the problem (discrepancy) into parts and the programming of parents and others involved in the problem to lessen the discrepancies. In turn, the child's day is broken down into parts as is the discrepancy. Logical steps for handling the problem behavior are suggested to parents, et. al., and follow-up conferences are held to redefine rules, provide support, etc. The technique was attempted with thirty-four (twenty-eight were boys) child guidance clinic cases of eneuresis. Eighty-nine per cent of the group were successfully treated for the problem, the criterion being no bed wetting for one year. Though no follow-up was accomplished, there also appeared to be improvement in school behavior in all but three of the 89 per cent. The treatment was "indirect" in that it got at "the detection of allegedly contributing causes or conditions, or portions of the child's orbit of daily living which can be detected as weakening his self-control and self-discipline rather than trying to deal directly with the eneuresis itself" (p. 711). Phillips notes that the "method works toward aiding the child's discriminations and the parental discriminations as to what is and what is not relevant to maturity." In another article, Phillips (1960c) amplifies his theory of working on problems by logical steps. "The theory assigns the symptom to a general category of behavior disorder, not to an underlying state. Therapy is based on a system of increasing structure (i.e. clarifying the relationship between behavior and its consequences)... through 'controlling the effects'..."

Phillips' theory of the need for structure is more clearly outlined in one of his books (1960a). "We are not emphasizing doing things for the child, or to the child. We are emphasizing the development of a structure which is conducive to the child's learning, achieving, and developing emotional and social maturity. Structure is the crux of the matter. Structure is a definite concept; it is a way for us to come to grips with important problems. It is a kind of summary term, synonymous with order, with planned learning, with an effective course of action" (p. 183). The treatment program is corrective in that it is based on the idea that "it is often a lack of good discipline in their outer lives (which leads to) a lack of self-discipline in their inner lives. Outer disorder leads to internal distress, outer order promotes inner security and well-being" (p. 184). A classroom program is suggested which involves the use of "natural or logical" consequences for choices, for specific and clear goals, for keeping expectations proportionate to the child's intellectual, educational, and emotional capacities, and for having rewards follow normally and inherently from successful completion of work. Phillips notes that, "Learning better behavior usually entails suffering some unpalatable consequence from misbehavior and receiving reinforcement for good behavior." He recommends the use of social isolation as a logical consequence, the working with parents around being consistent, and the coordination among all teachers of a particular child in the junior and senior high school setting.

Research to test the Phillips theory has been confined to that done by Phillips and his associates. The eneuresis study has already been cited (1948). Phillips and Haring (1959) designed a special classroom for emotionally disturbed children wherein the class revolved around the hypothesis that, "...such a child lacked order or structure in his environment and in his emotional-educational life." The classroom attempted to increase "the definiteness and structure of the daily classroom experiences." Booths were provided for self-and other-imposed isolation. Play and recreation were used as positive rewards, to be participated in only after assigned work was completed. "Isolation was normally the preferred and most effective technique when a child's behavior disturbance adversely affected others." Despite methodological problems (mainly, poor controls), there occurred more educational and behavioral gains with the structured classroom than with regular classroom controls or with permissive classroom comparison children. The results were obtained in six months. In a second study (1960b), Phillips attempted to compare his logical short-term therapy with "depth therapy." With a stress on consistency and on "keeping structure," and with ten or less interviews per patient, the short-term techniques gave better results (less frequency and intensity of symptoms) than the depth treatment. Fewer interviews were required, and parents were more satisfied with the short-term method. The study was based on the hypothesis that, "Children misbehave...largely out of having too loose structure of requirements and relationships. If this structure is firmed up in sensible, fair, consistent ways, the child will usually improve." He goes on, "The child is part of the interpersonal system of the family, neighborhood, school, and so on. Change the system...and you change the child" (p. 271). Citing two to three dramatic improvements for some seriously misbehaving children, Phillips calls the treatment key the "child's pattern of interaction." "The theoretical question can be raised as to why the parents are unable to set appropriate limits, with the implication that this question requires extensive answering...Questions asking what (the parent does or does not do that leads to difficulties) and how (the parent perceives the parent-child impasse) are relevant and answerable..., whereas why questions are not; the former are heuristic, the latter is not."

Kitano (1962) studied behavior problem pre-school children who were in day care centers due to their mothers' working. With a sample of forty-six, he concluded, "It appears that, if role prescribers (in this case, teachers) will hold expectations for behavior which are similar and reasonable, then there will be little variation in the behavior of children in this situation. This was true even of children who were considered serious problems" (p. 232). When "serious problem" children were later observed by trained raters in "structured" situations, all ratings were favorable. "What constitutes a problem can then be analyzed from the point of view of expectations and behavior." Newell (1934) suggested the making up of specific behavior changes desired to bring about said changes, as well as the encouragement of teachers to reinforce any tendency to make the changes--both with verbal and material rewards. Newman (1959) studied institutionalized disturbed children by the critical incident method. She found that, "By careful scrutiny of the incidents and their evaluative ratings, it became clear that hyperaggressive boys require an explicit, limited, concrete, carefully planned, brief assignment. Room for doubt, decision, confusion, or ambiguity causes disorganization...These children often found very rigid, unimaginative, highly structured methods more acceptable and less frightening than open-ended creative...types of tasks" (p. 641-642).

More indirectly, Levine and Spivack (1959) studied a group of disturbed institutionalized boys. Using the criterion of their "citizenship grade" for which the boys were allowed off campus on a merit system, they found that behavior regressed when no immediate goal or incentive was present, despite the availability of long-range goals. They concluded that the boys had a "constricted view of time" (p. 113). Slawson (1943) found that, with institutionalized delinquent boys, there must be complete fairness and the employment of deprivations (or whatever is done about an aggressive act) must be done by the person directly responsible for management of the child in the immediate situation. Those who give must also be the takers-away.

Clarke (1958) published an Attitude Consistency Handbook for teachers in the Seattle, Washington Public Schools. By "prescription," teachers of behavior problem children are referred to a section of the handbook which describes their ideal attitude toward the child's behavior. In this way, each teacher of the problem child would (theoretically) follow a consistent set toward the child. Five attitudes are described: "Unsolicited Friendliness," "Active Friendliness," "Passive Friendliness," "Firm Kindness," and "Matter-of-Fact." For each attitude, the teacher is provided information concerning the dynamics of the type of child with whom it is used, specific behaviors of that child, suggestions as to what a teacher should do, and descriptions of expected behavior which should follow from the prescribed attitude. The "Matter-of-Fact" attitude is designed for the acting out and delinquent child and is described as a "management device." The teacher is supposed to (a) be very firm; (b) not let his emotions enter in; (c) never go back on his statement or demand; "do not relent --don't make a demand in the first place if you aren't prepared to carry it out to ultimate conclusion;" (d) avoid being lenient or permissive; (e) use show of force or actual force if necessary to enforce demands; (f) not use statements as threats; and (g) keep one step ahead of the pupil, anticipating what's going to happen, and then being fully prepared to handle it; "Be direct with a forceful show of confidence on your part; you let the child know that there is no question about your demands or the demands of the situation; never argue." Unfortunately, no data is available as to the effects of the program or its efficacy.

The present author (1965) attempted to program parents and school officials in treatment of severe behavior problems. In his caseload of two, both pre-adolescents were delinquent and both had been subjected to unsuccessful treatment prior to the onset of the program--either with no effect or with no lasting effect. In the case where the child remained in school, behavior modification was successful in approximately ten weeks. Additionally, gains were made in achievement (reading) testing. In the other case which was allowed voluntarily to leave school just as treatment began, no changes were brought about. Attempts at programming the parents of the latter case proved fruitless, and no other resource was available to manipulate the child's environment. The experience would appear to indicate that the school is a vital force in behavior modification programming.

The literature reviewed above indicates that structure, limits, and consistency are essential for non-deviant prosocial child development. Those contingencies for healthy development occur in the environment of the child, and corrective experiences must also be environmental. Attempts at bringing about behavior modification by programming consistency into the child's environment via school and parents have, for the most part, been successful--perhaps more so than "traditional" therapeutic techniques.

Instruments Used in the Study

The Behavior Classification Project Behavior Check List

The Behavior Classification Project began as an "interdisciplinary effort to develop a systematic classification of children's emotional disorders" (Dreger, 1964). As a project of the Florida Council of Mental Health Clinic Directors, it was based on the belief that standard American Psychiatric Association nomenclature was not adequate to classify the disorders of children. A survey of seventeen Florida clinics revealed that forty per cent of all children seen were classified as "Adjustment Reaction of Childhood," which "says exactly what we knew about him in the first place, that he has a problem."

The check list was constructed from "strictly behavioral items" which were "as purely descriptive of behavior as a team of experts and consultants could make and refine them." Items were included from "virtually all of the well-known tests and scales as well as a dozen less known sources." Additionally, fifty items were included which reflected Florida parents' presenting complaints when they brought their children to mental health clinics. The final form was expanded to 229 items by selection from other scales, submission to a panel of experimental psychologists and clinicians in Florida, and subsequent committee revision by the Florida Council's project staff.

The check list was subjected to try-out in 1961-62 in thirteen child guidance clinics in Florida for all first admission, white, English speaking children between the ages of six and thirteen. It was presented to parents by the card sort method, with directions for sorters to note behaviors observed during the past six months and to include doubtful responses as "No's." Useable records were obtained on 351 cases and were matched for age, sex, religion, and socio-economic status with eighty controls. Despite the presence of fifteen "positive" behaviors on the list, the number of "Yes" responses was used as the criterion, and the difference in this response between clinic and control groups was significant beyond the .001 level. A factor analysis was also completed, but does not have relevance for this study.

An inter-rater reliability check was performed on the records of children from four clinics, totalling seventeen. For ten of the seventeen records the coefficient of agreement between the original parent sort and a later sort by another relative or close friend was .55, but the mean coefficient was .36. A later test-retest reliability check was reported which indicated an overall coefficient of stability of .87.

For the purposes of the present study, the fifteen positive behaviors are removed, so as to provide a simplified counting method of scoring. The study attempts to determine if negative behaviors change significantly under a given procedure, without reference to an increase in positive behaviors. Apparently the positive behaviors included were not used as such in the reliability and validity work with the instrument. Additionally, both parents and teachers use the check list.

The rationale for the use of teacher/parent judgment in the assessment of maladaptive behaviors has some basis in the literature of the field in the former case, but none in the latter. A study by Wickman (1928) had considerable influence with regard to the problem of the validity of teacher rating of adjustment. Wickman reported a marked discrepancy (rho: -.11) between the rankings of teachers and those of mental health specialists on the relative seriousness of various behavioral problems of school children. However, the Wickman study has been severely criticized on the grounds that directions to teachers and clinicians differed markedly.

Stouffer (1952) reported a study in 1952 in which he used the same design as that of Wickman, but instructions to teachers and clinicians were the same. This study demonstrated a much closer agreement (rho: +.61) between teachers and clinicians in their rankings of seriousness of children's behavior problems. Studies by Hunter (1957) and Ullman (1952) were also reported in the 1950's which showed greater congruence between teachers and mental health specialists in their relative evaluations of childhood behavior problems. More recently, Bower (1958), Lambert and Bower (1961), and Fitzsimmons (1958) provide evidence for the ability of teachers to select maladjusted children. However, Klein (1966) found a large, statistically significant discrepency between informal staff perceptions of disturbed boys' behavior and more objective, systematic descriptions derived from coding of concrete reports. After reviewing several studies pertaining to that ability, White and Harris (1961) conclude as follows: "Teachers are obviously the best source for identifying children who are disturbing to _them_, as teachers. Whether their judgment of disturbing children is the same thing as disturbing children is still not satisfactorily answered" (p. 172). The present study only attempted to use school official judgment in relation to problems faced by the school. Although the treatment group was not nominated by teachers due to administrative problems, teachers were used for check list assessment and evaluation.

The Stanford Achievement Test - Reading and Arithmetic Subtests

The Stanford Achievement Test was developed in 1953, and a new revision has been accomplished, but does not have a sufficient number of alternate forms for use in this study (World Book Company, 1953). The test includes an Advanced Battery suitable for measuring the achievement of students in grades seven, eight, and nine. The Advanced Battery is apparently sensitive to achievement differences from the fourth grade level to the achievement level corresponding to grade 12.9, though the authors note that grade equivalent scores above 10.0 are obtained by extrapolation rather than actual norming procedures.

The Advanced Battery includes nine skills area tests, but the present study uses only four of these: Arithmetic Reasoning and Arithmetic Computation which combine to make an Average Arithmetic score, and Paragraph Meaning and Word Meaning which combine to make an Average Reading score. The reason for including only four tests is a pragmatic one: administration of the entire battery takes several hours. Also, arithmetic and reading are usually considered basic skills.

The Arithmetic Reasoning subtest is divided into two parts. The first deals with "reasoning with problems taken from life experiences" and includes a low vocabulary level as well as a "controlled computational level." This part tests the student's knowledge of the four major computational processes and includes various kinds of measures used (e.g., space, weight, time, and temperature). The second part tests the "informational background of pupils and their understanding of the number system." The Arithmetic Computation subtest measures "proficiency in computational skills." Despite its multiple choice format, a "not given" choice is used as a response to discourage guessing. Though both tests are timed, limits are "generous," and the tests are considered power rather than speed tests. The Average Arithmetic score is computed by adding together the Arithmetic

Reasoning and Arithmetic Computation scores.

The Paragraph Meaning subtest "consists of a series of paragraphs, graduated in difficulty, from each of which two or more words have been omitted. The pupil's task is to demonstrate his comprehension of the paragraph by selecting the proper word for each omission from four choices that are offered to him." It measures the pupil's "ability to comprehend connected discourse." In the Word Meaning test, the "student is required to select the proper answer for a given stimulus word from a series of four alternatives." In addition to items testing the student's knowledge of synonyms, simple definitions, and ready associations, there are "items designed to measure higher level comprehension of the concepts represented by words, and the fullness of understanding of terms." Comparison with established word counts was the primary method of determining "appropriateness" of test item words. Again, though time limits are used, the tests are considered power tests. The Average Reading score is determined by combining the Paragraph Meaning and Word Meaning scores.

Reliability data is presented in the 1953 Manual. Based on random samples from thirty-four school districts, the following split-half reliability coefficients were computed for grades seven and eight:

Paragraph Meaning	.841-.855
Word Meaning	.907-.880
Arithmetic Reasoning	.897-.914
Arithmetic Computation	.890-.860

The Spearman-Brown formula was applied, despite the fact that test time limits were imposed. No coefficients of stability are provided in the

Manual; neither are correlation coefficients between "equivalent" forms administered to the same groups of students. However, Townsend (1954) obtained a correlation of .90 between forms J and K when administered five months apart. The coefficient took into account the expected five months gains.

The Standard Achievement Test was standardized on approximately 400,000 pupils from four geographic regions in the United States. Within each region, representative states were selected for the sample from which were selected school districts to represent all sizes of district. In all, 363 school districts were tested in thirty-eight different states.

Standard administration directions for group or individual administration are provided in the Manual. Three sittings are suggested for the four tests involved in the present study, and time limits are as follows: Paragraph Meaning, 25 minutes; Word Meaning, 12 minutes; Arithmetic Reasoning, 35 minutes; Arithmetic Computation, 35 minutes.

A rationale for the use of academic achievement testing is provided by a representative review of the literature. Bower (1958) conducted an extensive study of emotionally disturbed fourth, fifth, and sixth grade children. He found that the disturbed children were significantly below a control group of "normals" with respect to academic achievement, even though there were no differences between the two groups on mean individual intelligence test scores. Bower found that the differences grew larger as grade in school went up and that differences were larger in arithmetic than in reading achievement. He points out "...the reciprocating and mutually reinforcing effects of achievement and adjustment" (p. 25).

Gann (1945) studied the relationship between reading retardation and personality with children in grades three through ten. With retarded and nonretarded readers matched for chronological age, mental age, sex, and intelligence he found that retarded readers show more "unfavorable" signs in their personalities. Jackson (1944) conducted a similar study in which he compared "retarded" to "advanced" readers in grades two through six. He found more "fears, introvertedness, worries, and failures" among the retarded group. Damerau (1934) reported that "reading disability and maladjustments of behavior are independent variables, each needing its own specific form of treatment," but was apparently a minority of one. Raines and Tact (1951) reviewed nine studies and concluded that reading retardation is a symptom of emotional disturbance in children. Additional evidence is provided by Witty (1950) and Fabian (1955). Witty summarized and discussed available evidence that reading disability goes with personality difficulties. Fabian studied the incidence of reading disability among children referred to treatment institutions due to emotional disturbance. In a placement facility for "very disturbed children," Fabian found 62 per cent to be afflicted with a reading disability, which he defined as a 25 per cent deviation from the norm for a given child. In the New York Bellevue Hospital's observation unit for disturbed children, Fabian found the incidence of reading disability to be 73 per cent of a population, 83 per cent of which was male. Fabian concludes that "reading disability was one facet in a complex picture of personality difficulty and could be used as an index to the extent of the pathologic condition."

The Children's Manifest Anxiety Scale

The Children's Manifest Anxiety Scale was developed by Castaneda, McCandless, and Palermo (1956). The Children's Scale was adapted for children by a modification of the Taylor Manifest Anxiety Scale which was prepared for use with adult populations (1953). The adult form took items from the Minnesota Multiphasic Personality Inventory which appeared to measure "anxiety." In turn, these items were subjected to clinicians' judgments, with a criterion cut-off point of .80 agreement. The sixty-five items that met such a test were finally pared to fifty. Concerning the Children's Scale, Ruebush (1963) points out that it is "...a measure of the child's tendency to experience a general and chronic state of anxiety, rather than of a tendency to experience anxiety only in specific situations or as a process of transitory phenomenon..." The Children's Scale consists of forty-two items designed to show up manifest anxiety and eleven items making up a "Lie Scale (L)" designed to measure the tendency to falsify responses. The Scale is scored by counting the number of "Yes" responses to the "anxiety" section of the test. L Scale scores are determined by counting the number of "Yes" responses on all but two of the L Scale items, the latter being scoreable with "No" responses.

Though normative data are not available for children in grades seven and eight, Castaneda (1956) and Lipsitt (1958) presented mean scores, along with standard deviations, for sixth grade boys. They were as follows:

	N	M	S.D.
Castaneda:	73	16.58	7.39
Lipsitt:	41	14.51	8.12

In the present study, norms are relatively unimportant in that the Scale is to be used as a measure of change over a period of time. With this type of design, reliability data takes on added importance. Castaneda and Lipsitt report test-retest reliability coefficients for sixth grade boys of .82 and .91, respectively. Castaneda used a one-week interval, and Lipsitt measured changes over two weeks. Although Castaneda reported a tendency for test-retest reliability to decrease slightly with increased age, Lipsitt reported findings to the contrary. In both studies, no reliability coefficient reported was below .82, regardless of age.

The L Scale was also subjected to a test-retest reliability study by Castaneda (1956). At grade six, the coefficient was .53, which was considerably below the reliability for the anxiety scale, but which is accounted for by the smaller number of items in the L Scale. Castaneda has also shown low nonsignificant correlations between the anxiety scale and the L Scale. For boys in grade six, that correlation is -.10. Studies providing additional normative and reliability data are reported by Holloway (1961) and Palermo (1959), and the latter found one-month test-retest reliabilities to be only slightly lower than those cited above.

A rationale for employing the Children's Manifest Anxiety Scale as a measure in the present study is provided by a review of representative literature. Collins (1962) factor analyzed child psychiatric clinic data for 268 boys, aged eight to ten, and 98 girls in the same age range. With "behavior problem" children who were not retarded, psychotic, or organically impaired he found one of three factors to be "Anxiety." McCandless (1956) and Trent (1957) found Children's Manifest Anxiety scores to be negatively related to peer acceptance. Lipsitt (1958) reported such scores as negatively related to his self-concept measure for children.

The literature reviewed above demonstrates sufficient reliability and validity of the instruments to be employed in this study so as to make them effective in evaluating the results of the study. In addition, there is sufficient rationale for both the type of instruments described and for the instruments, themselves.

CHAPTER III

PROCEDURES

Problem

This study is an attempt to develop and adequately evaluate a treatment procedure designed to reduce the incidence of emotional disturbance in public school classrooms as it is manifested in disruptive and maladaptive classroom behavior. The treatment program is based on past research which indicates that at least a major part of maladaptive behavior in children stems from environmental inconsistency--principally from the child's home via his parents, but also from other areas of his "life-space." The non-institutionalized, public school disturbed and disturbing child apparently lacks adequate boundaries for his behavior--exacting and unyielding expectations--from significant adults, and, as a consequence, constantly seeks out and tests behavioral limits in an attempt to find regularity and security for his life. It is hypothesized that, once given a program of home-school consistency which does not yield and into which are built unyielding logical consequences for both compliance and non-compliance, the maladaptive child will learn to operate within reasonable social limits, with a concomitant reduction of maladaptive acting-out behaviors. Additionally, the study attempts to ascertain whether or not academic achievement improves when behavior improves as measured by the Stanford Achievement Test Reading and

Arithmetic batteries. Finally, an attempt is made to discover whether or not a certain "inner" state change (anxiety) occurs with behavior change as measured by the Children's Manifest Anxiety Scale.

Sample

The study was conducted in conjunction with a local junior high school which had a large number of classroom behavior problems. The treated group was restricted to boys, students in grades seven through nine, and students of at least average intelligence. Administrators and counselors of the treatment school were asked jointly to nominate "the most severe male behavior problems" in their school.

Each nominee was evaluated by the investigator using the school plant and the clinic facilities of the School of Education of the University of Oregon. Nominated students' school records were checked for group and individual intelligence test scores. Those students who had in their file three tests on which they scored in the Average or above (I.Q. 90 or above) category of intellect were automatically included; any student without sufficient tests or who scored sporadically on past tests, was given a Wechsler Intelligence Scale for Children, and his Full Scale I.Q. determined his eligibility. In all, twenty-nine children were nominated, and five necessitated additional intellectual evaluation.

Additionally, parents were interviewed to discover whether or not they were willing to participate in the study. No specific goals were discussed; only the child's current behaviors were talked about in an effort to secure parental cooperation to "try something new to help your son." Finally, all children who tested in the Average range or above on the WISC or on three group tests of intelligence and whose parents agreed to participate were subjected to a "records check" by reference to community agencies by whom the child might have been known. It was important, for example, to obtain Juvenile Court cooperation and approval for those children who were under Court supervision at the time of evaluation and treatment. The final treatment group included all of those nominated whose parents would agree to cooperate, who were of average intellect, and who were not excluded by a legal agency.

Figure 1 shows the disposition of all cases nominated, and Figure 2 provides a statistical description of the final treatment group (See page 49). Seven of the final fifteen in the treatment group were in grade 8, and four each were in grades 7 and 9.

The inclusion of male-only students has some rationale in a representative review of the literature. Phillips (1962) found a relationship between sex and anxiety level and school achievement. The original normative study of the Children's Manifest Anxiety Scale (Castaneda, 1956) found girls to score significantly higher than boys, and follow-up studies have supported this conclusion (Levine and Spivack, 1959; Palermo, 1959). Moreover, the proportion of male to female classroom behavior problems is extremely unequal, with boys predominating (Bower, 1958). Beller and Neubauer (1963) found a sex-difference in the symptomotology of pre-school children seen in a child guidance clinic, with "impulse control" problems predominating with males.

Although Holman (1953) found no intelligence differences between his "maladjusted" and normal samples, Bower (1958) discovered

FIGURE 1

DISPOSITION OF SCHOOL-NOMINATED STUDENTS

Completed Study	Below 90-WISC	Initial Appt. Parent Refused	Legal Agency Refused	Pre-study Check-Lists Refused	Physically Moved After Beginning of Study	Total
15	2	3	1	3	5	29

FIGURE 2

STATISTICAL DESCRIPTION OF TREATMENT GROUP

Variable	Mean	Range
Age	172.333 months	150-186 months
I.Q. (most current score)	103.800	91-122
G.P.A. (Beginning of study)	1.69 (4. pt. scale)	.7-2.85
S.A.T. - Reading (Beginning of study)	7.5	3.3-12.3
S.A.T. - Arithmetic (Beginning of study)	7.4	4.3-10.4

significant differences in intelligence between his two groups. Olson (1930) reported a non-significant but consistent trend in his analysis of the relationship of intelligence to emotional maladjustment, using the Stanford-Binet scale. So long as differences might exist, the effect of those variables can be taken out of the study by limiting the sample to males and those within the non-defective range of intelligence.

Although no child was excluded for this reason, an evaluation of each family's socio-economic status (using Hollingshead's scale, 1958) was made to determine the effect of gross differences in that factor on both parent and child behavior, if any. The choice of school provided some overall uniformity with respect to social class and economic level, since only one school was used. Extremes in social class were not included in the final treatment families in that none met Hollingshead's criteria for Categories I or V. There was a slight negative direction, however, in that only one family was included in the Category II (corresponding to an "upper-middle class" designation) while five families met the criteria for Category IV ("lower-middle class"). Over one-half of all families (nine) were in Category III ("middle-middle class").

Collection of Data

Students were evaluated four different times with three different instruments. The instruments employed were as follows:

1. The Behavior Classification Project Behavior Check List (see Appendix C);
2. The Stanford Achievement Test, reading and Arithmetic

subtests;

3. The Children's Manifest Anxiety Scale.

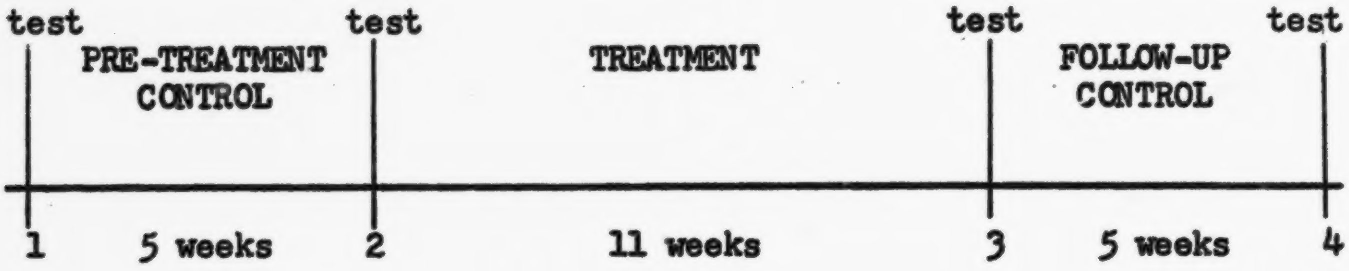
In addition, some students were tested once with the Wechsler Intelligence Scale for Children. The Children's form of the Rosenzweig Picture-Frustration Study was administered, but was later discarded due to its lack of reliability.

The basic treatment and test design involved the use of self-controls. It was impossible to utilize a non-treated control group due to the nature of the project: environmental manipulation would possibly affect those for whom it was not directly intended. Students included in the study were evaluated, left alone without treatment of any kind for five weeks, evaluated a second time, given the consistency program for eleven weeks, evaluated a third time, left alone for a final five weeks, and then evaluated a final time. The practice effect inherent in eleven week or less test intervals was avoidable with the Stanford Achievement Tests due to the availability of five equivalent forms; however, alternate forms were not available with either the check list or the anxiety scale. The reader is referred to Figure 3 for a diagram of the research design.

In addition to basic data concerning psychometric and check list behavior change of the treatment group, it was deemed desireable to collect data which were designed to provide an indication of how well both parents and teachers were able to follow their consistency programmed instructions. It was then the intention to check the relationship between adult behavior and child behavior. However, due to the availability of only one experimenter-programmer, direct observation

Figure 3

TREATMENT/DATA COLLECTION DESIGN



of a time sampling nature was not possible. Self-report information was difficult to quantify and subject to large errors in both validity and reliability. Insofar as teachers were concerned, almost all students in a given grade took classes from the same teachers; any differences in child behavior change when broken down by grade in school should have provided an indication of some teacher differences, if any. It was finally decided that parent cooperation would be checked by reference to experimenter ranking of that variable after each week's home visit. On that visit, the experimenter asked pertinent questions about cooperation, about progress of the child in the home, and about needed changes in the program. The mean rank of each family was computed and families were ranked on those averages.

Treatment of Data

Differences in change between the non-treatment (control) period and the treatment period on all assessment instruments were subjected to analysis of variance by use of a Treatments by Subjects design, so-named by Lindquist (1953). By use of this statistical technique, the precision of the experimental analysis is increased by eliminating inter-subject differences as a source of error. The analysis of variance was carried out for each of the instruments employed and the F ratio was formed in order to test the significance of any differences found. The .05 level of significance was used to test the F ratio. Specific hypotheses were tested by use of the t test for uncorrelated groups.

In order to ascertain the relationship between adult (parent) cooperation and child behavior change, a rank order correlation was computed between family cooperation rank and the corresponding child success rank. The latter was based on the amount of positive change on the check list. The small size of the sample and the non-quantitative nature of the data justify the use of Spearman's non-parametric rank order coefficient (Walker and Lev, 1958).

Treatment Procedure

As was noted above, the general treatment approach involved the imposition of an almost rigid type of consistency of the behavior problem child by the child's teacher and parent(s). The basic program for each child was as follows:

1. The use of firm limits as concerned time and behavior expectations and deviation;

2. the use of non-punitive consequences which followed from the child's act--and which were invoked by verbalized logic;

3. the use of social reinforcement for child compliance with the

programmed expectations;

4. the use of activity and freedom as positive consequences for child compliance;

5. the use of short-term, specific, and brief objectives and activities;

6. the use of an increasing responsibility system for the child; responsibility coming when it was earned.

After the initial interview wherein parental permission was obtained for child inclusion in the study and after the initial check list and test data were collected, each home was visited for a second time by the experimenter. The second visit was made in order to obtain a daily schedule of activity for each child from the parent. A structured, information gathering format was used for the interview, and the same questions were asked at each home visited. Activity schedules were obtained for each child for each day of the week and exceptions to the general schedule were noted (see Appendix D).

Based upon the activity schedule obtained from the child's parents, a program was worked out for each child. He was provided with a list of daily activities (modified slightly for weekends) and times by which he was to complete each activity. In addition, written behavior expectations for home and school were provided the child, family, and teachers, together with suggestions for verbal reinforcement and suggestions for consequences for non-compliance. In this way, a child's entire "life space" was programmed twenty-four hours per day, seven days per week. Though individualization was provided in programming and scheduling, the basic principles outlined above were followed in each case. Basic programs are provided in Appendices A and B.

A set of "general principles" were provided parents and teachers and were discussed at the implementation of the program. Subsequent home visits usually included a reiteration and review of the principles. The general principles were as follows:

a. It is as important to notice good behavior and adult-like responsibility as it is to invoke consequences for deviance. Let the boy know you noticed positive behavior.

b. All nastiness, arguing, fighting, etc. should result in short-term (not longer than ten minutes) isolation from the family, class, group.

c. All consequences imply that the boy could have chosen to act within bounds of the rules and that he can try again and do better. They are not meant to be punishments.

d. Built into the program are provisions for gradually relaxing some of the rules as the boy earns the increased responsibility.

e. "Verbalizations" need not be followed explicitly; they are provided only as guidelines. However, key words are important in that they imply "choice," "responsibility," and the ability to learn new behavior patterns--to "try again and do better."

Three principles were provided for teachers only:

a. Homework should be given each night; it should be brief (approximately fifteen minutes), involved written work as the finished product, be meaningful in terms of the class' current work (not "busy work"), and be on the boy's grade level so that he can succeed if he tries.

b. In-classroom written work should be concrete, meaningful, on the boy's grade level, and short-term. Assignments should be clearly communicated each day.

c. Periods spent after school should involve meaningful activity and should be limited to the time the teacher is usually expected to remain after school. Time after school is cumulative and teacher time conflicts are resolved by order of period. That is, if the period 1 and period 2 teachers of the same boy wanted him to stay after school, the period 1 teacher would have priority.

Programs were implemented in the school via group meeting and individual conferences with specific teachers. Following the initial introduction of the program, daily contact was maintained with the school with the experimenter spending from four to five hours daily in the school, conferring with teachers and administrative officials and visiting classrooms. Home programs were begun by an initial home visit and were followed up by weekly visits to the home on a regularly scheduled basis. No family was unable to keep at least one appointment per week, and some families required additional assistance in implementing the program. Additionally, a day answering service was maintained through the clinic facilities of DeBusk Memorial Center, University of Oregon. Home visits usually lasted for one hour for the first three weeks and for one-half to one hour for the remaining eight weeks. Attempts were made to visit when both parents could be home, but in two families the father was rarely seen.

Twenty-four teachers participated in the study, and they were paid from forty to one hundred and eighty dollars depending upon the subject they taught and the number of children with whom they were involved. Funds were provided by a grant from the United States Office of Education, Handicapped Children and Youth Branch.

CHAPTER IV

RESULTS OF THE STUDY

Check List and Test Results

The general objective of the study was to discover whether or not there are significant, stable, and positive differences in behaviors and test scores between a group of classroom behavior problem children when treated with a milieu consistency program and the same group when not so treated.

The specific objectives were to test sixteen hypotheses, using Analysis of Variance and t test for uncorrelated groups, with the acceptable level of significance being .05. The results of each test are reported immediately following the statement of the sixteen hypotheses.

> Hypothesis 1. There are significant differences in frequency of behavior checks on the Behavior Classification Project Behavior Check List between students when treated with a milieu consistency program and the same students when not so treated.
>
> Hypothesis 2. There are significant differences in frequency of behaviors checked on the Behavior Classification Project Behavior Check List between post-treatment checks and follow-up treatment checks with the same group of students.
>
> Hypothesis 3. There are significant differences in frequency of

behaviors checked on the Behavior Classification Project Behavior Check List between pre-treatment-post-control checks and follow-up checks with the same group of students.

Hypothesis 4. There are significant differences in frequency of behaviors checked on the Behavior Classification Project Behavior Check List between pre-control and post-control checks with the same group of students.

F ratios were computed for check list data for all four times they were collected; separate analyses were computed for the total number of checks and for parent checks and teacher checks. Tables 2, 4, and 6 show means and standard deviations for the check list data. Tables 3, 5, and 7 show summary tables for the check list analysis and each F ratio.

TABLE 2

TABLE OF MEANS AND STANDARD DEVIATIONS FOR COMBINED BEHAVIOR CHECK LIST DATA COLLECTED FOUR TIMES

	Mean	S.D.
(1) Pre-control Test	130.357	30.310
(2) Pre-treatment Test	89.357	35.014
(3) Post-treatment Test	61.143	26.281
(4) Post-control Test	68.857	30.916

TABLE 3

ANALYSIS OF VARIANCE SUMMARY TABLE FOR COMBINED BEHAVIOR CHECK LIST CHECKS COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	40353.858	13451.129
Subjects	13**	62000.214	4769.247
Treatments X Subjects	39	13648.642	349.965
Total	55	116002.714	
		F=38.436*	

* significant at the .05 level
**one parent refused cooperation at the time of final data collection; therefore only fourteen subjects were included for parent data.

TABLE 4

TABLE OF MEANS AND STANDARD DEVIATIONS FOR TEACHER BEHAVIOR CHECK LIST DATA COLLECTED FOUR TIMES

	Mean	S.D.
(1) Pre-control Test	87.533	31.002
(2) Pre-treatment Test	65.600	24.546
(3) Post-treatment Test	48.357	9.923
(4) Post-control Test	54.067	28.601

TABLE 5

ANALYSIS OF VARIANCE SUMMARY TABLE FOR PARENT BEHAVIOR CHECK LIST CHECKS COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	6406.268	2135.423
Subjects	13	10037.804	772.139
Treatment X Subjects	39	5807.482	148.910
Total	55	22251.554	

F = 14.3405*

*significant at the .05 level.

TABLE 6

TABLE OF MEANS AND STANDARD DEVIATIONS FOR PARENT BEHAVIOR CHECK LIST DATA COLLECTED FOUR TIMES

	Mean	S.D.
(1) Pre-control test	42.857	26.411
(2) Pre-treatment Test	22.429	13.318
(3) Post-treatment test	17.143	11.278
(4) Post-control Test	15.571	11.388

TABLE 7

ANALYSIS OF VARIANCE SUMMARY TABLE FOR TEACHER BEHAVIOR CHECK LIST CHECKS COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	15114.584	5038.195
Subjects	14	31522.834	2251.631
Treatments X Subjects	42	6959.166	165.694
Total	59	53596.584	
		F = 30.407*	

* significant at the .05 level

Since the analysis of variance tests yielded significant results, it was meaningful to check the significance of differences between individual treatment means, employing the t test. Tables 8, 9, and 10 show a table of differences for total checks, parent checks, and teacher checks means respectively, in which "A" denotes the difference between two means.

TABLE 8

TABLE OF DIFFERENCES FOR COMBINED BEHAVIOR CHECK LIST TREATMENT MEANS

	A_2	A_3	A_4
A_1	41.000*	69.214*	61.500*
A_2		28.214*	20.500*
A_3			7.714**

* significant at .05 level (one tail test).
** significant but trend is in direction opposite from that hypothesized.

TABLE 9

TABLE OF DIFFERENCES FOR PARENT BEHAVIOR

CHECK LIST TREATMENT MEANS

	A_2	A_3	A_4
A_1	20.428*	25.714*	27.286*
A_2		5.286	6.858
A_3			1.572

* significant at .05 level (one tail test).

TABLE 10

TABLE OF DIFFERENCES FOR TEACHER BEHAVIOR

CHECK LIST TREATMENT MEANS

	A_2	A_3	A_4
A_1	21.933*	39.176*	33.466*
A_2		17.243*	11.533*
A_3			5.710**

* significant at .05 level (one tail test).
** not significant, but trend is in direction opposite from that hypothesized.

Hypothesis 1 is tested by reference to the difference between Means 2 and 3. That difference is significant at the .05 level with the total check list and teacher check list means, but is not significant at that level with parent check list means. All differences between Means 2 and 3 are in the expected direction. Since the combined checks were to constitute the criterion for the hypothesis, reference to Table 8 would allow acceptance of Hypothesis 1. Thus, significant differences occurred in check list scores between the treatment period and the pre-treatment control period. The behavior of the treated group became less disruptive during treatment.

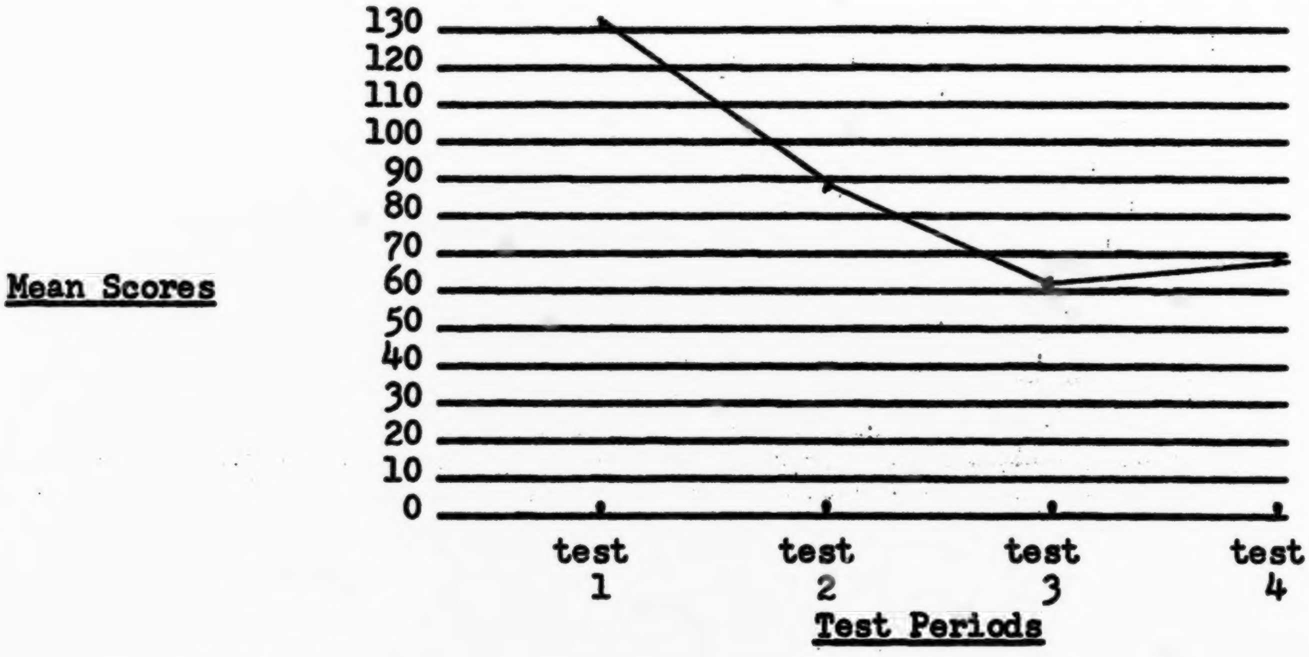
Hypothesis 2 is tested by reference to the difference between Means 3 and 4. That difference is significant at the .05 level with the total check list means, but is not significant at the level with either parent or teacher check list means. Further, only in the case of parent check list means is the difference in the expected direction. Were only the negative directional test made, Hypothesis 2 would be rejected; however, despite the unexpected direction of significant difference, that difference is significantly large at the .05 level. Despite the significant findings, Hypothesis 2 cannot be accepted in view of the unexpected direction of differences. Check list differences were significant between the treatment period and the post-treatment control period, but in a negative direction. The behavior of the treated boys became more disruptive during the follow-up control period.

Hypothesis 3 is tested by reference to the difference between Means 2 and 4. That difference is significant at the .05 level with the total and teacher check list means, but is not significant at that level with the parent check list means. All differences between Means 2 and 4 are in the expected direction. Since the combined checks were to constitute the criterion for the hypothesis, reference to Table 8 would allow acceptance of Hypothesis 3. Over-all behavior check list differences were significant between the pre-treatment control period and the post-treatment control period. Despite the finding that follow-up behavior grew worse, still it was better than that found before treatment.

Hypothesis 4 is tested by reference to the difference between Means 1 and 2. That difference is significant at the .05 level with total, parent, and teacher check list means. All differences are in the expected direction, and hypothesis 4 is accepted. Behavior check list differences between pre-control and post-control periods were significant. Apparently behavior significantly changed before treatment began. Figure 4 shows a graph of the combined check list means to show the trend of these data.

FIGURE 4

GRAPH OF MEANS OF COMBINED BEHAVIOR CHECK LIST DATA COLLECTED FOUR TIMES



The trend of the check list data was toward behavior improvement except in the post-treatment and follow-up period where a slight regression took place. A hypothetical ideal trend would differ from this trend in that the ideal trend would not show a large behavior change before treatment.

Hypothesis 5. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between students when treated with a milieu consistency program and the same students when not so treated.

Hypothesis 6. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between post-treatment testing and follow-up testing with the same group of students.

Hypothesis 7. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between pre-treatment-post-control testing and follow-up testing with the same group of students.

Hypothesis 8. There are significant differences in scores on the Stanford Achievement Test Average Reading subtest between pre-control and post-control tests with the same group of students.

An F ratio was computed for the means of the four administrations of the Stanford reading tests, using raw scores. Raw scores were used since grade equivalent scores do not constitute an interval scale. Table 11 shows means and standard deviations for the four test periods. Table 12 shows a summary table for the reading analysis of variance and the F ratio.

TABLE 11

TABLE OF MEANS AND STANDARD DEVIATIONS FOR STANFORD ACHIEVEMENT TEST AVERAGE READING RAW SCORES COLLECTED FOUR TIMES

	Mean	S.D.
Pre-control Test	54.867	18.168
Pre-treatment Test	50.200	16.550
Post-treatment Test	55.733	17.984
Post-control Test	51.000	15.223

TABLE 12

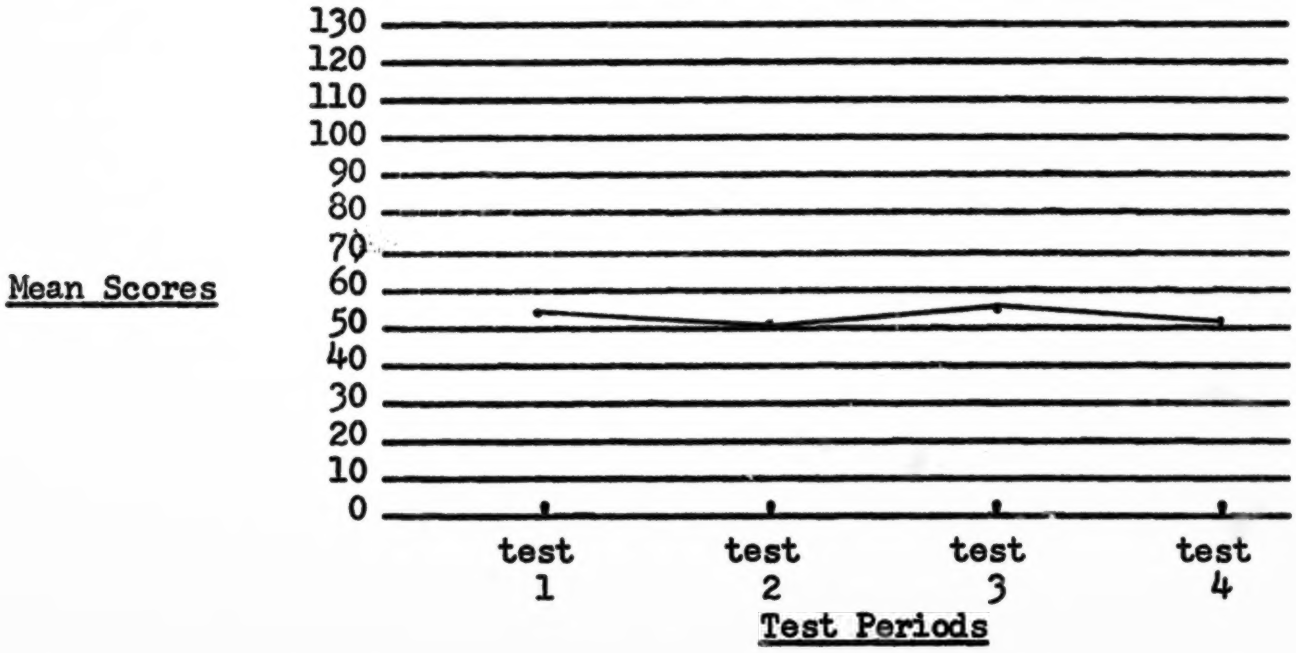
ANALYSIS OF VARIANCE SUMMARY TABLE FOR STANFORD ACHIEVEMENT TEST AVERAGE READING RAW SCORES COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	341.784	113.928
Subjects	14	15086.600	1077.614
Treatments X Subjects	42	2327.466	55.416
Total	59	17755.850	
		F = 2.056	

Since the analysis of variance did not yield significant results it was not meaningful to analyze individual treatment mean differences. As a consequence, Hypotheses 5, 6, 7, and 8 are all rejected. There were no over-all significant differences on the Stanford Achievement Test Average Reading scores between any of the four test periods. Figure 5 shows a graph of Reading means in order to show the trend of these data.

FIGURE 5

GRAPH OF MEANS OF STANFORD ACHIEVEMENT TEST AVERAGE READING RAW SCORES COLLECTED FOUR TIMES



There was a slight trend in the direction of reading improvement during treatment, but the over-all trend was toward a total lack of change.

Hypothesis 9. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between students when treated with a milieu consistency program and the same students when not so treated.

Hypothesis 10. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between post-treatment testing and follow-up testing with the same group of students.

Hypothesis 11. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between pre-treatment-post-control testing and follow-up testing with the same group of students.

Hypothesis 12. There are significant differences in scores on the Stanford Achievement Test Average Arithmetic subtest between pre-control and post-control tests with the same group of students.

An F ratio was computed for the means of the four administrations of the Stanford arithmetic tests, using raw scores (see above). Table 13 shows means and standard deviations for the four test periods. Table 14 shows a summary table for the arithmetic analysis of variance and the F ratio.

TABLE 13

TABLE OF MEANS AND STANDARD DEVIATIONS FOR STANFORD ACHIEVEMENT TEST AVERAGE ARITHMETIC RAW SCORES COLLECTED FOUR TIMES

	Mean	S.D.
Pre-control Test (1)	49.267	16.794
Pre-treatment Test (2)	47.333	17.166
Post-treatment Test (3)	52.467	19.144
Post-control Test (4)	48.267	16.196

TABLE 14

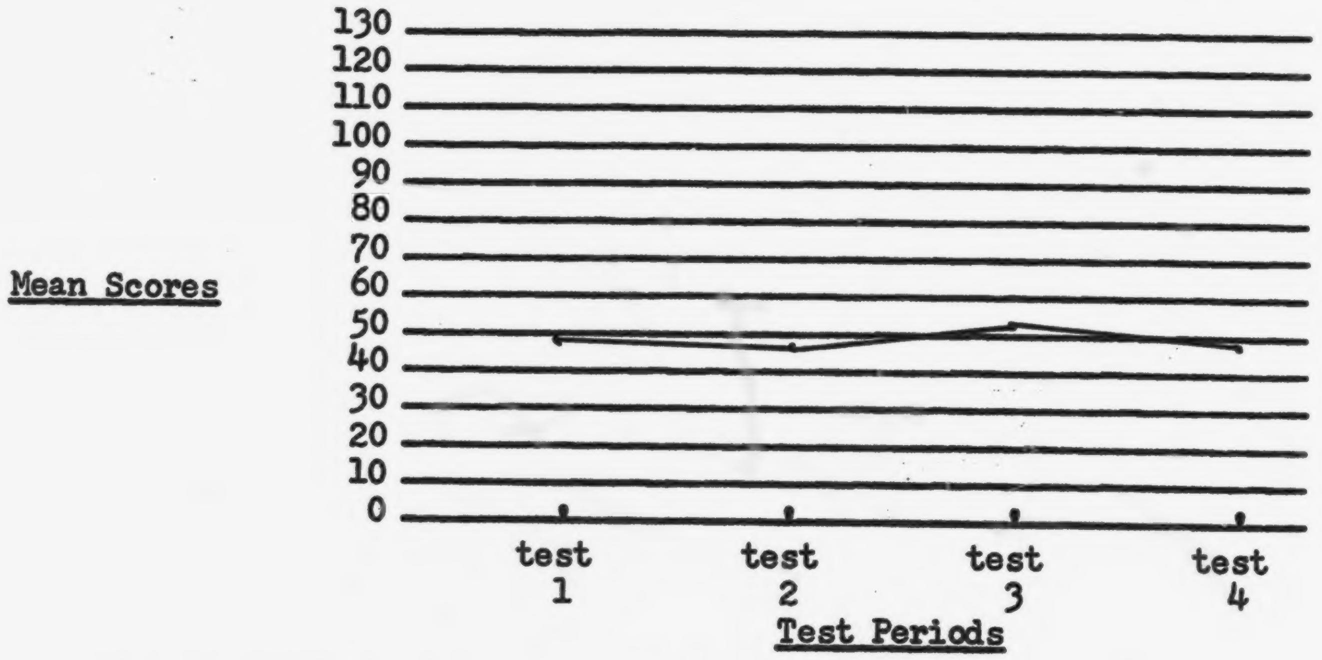
ANALYSIS OF VARIANCE SUMMARY TABLE FOR STANFORD ACHIEVEMENT TEST AVERAGE ARITHMETIC RAW SCORES COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	224.401	74.800
Subjects	14	16109.833	1150.702
Treatments X Subjects	42	1973.099	46.979
Total	59	18307.333	
		F = 1.592	

Since the analysis of variance test did not yield significant results, a specific analysis of individual treatment mean differences was not meaningful. As a consequence, Hypotheses 9, 10, 11, and 12 are all rejected. There were no over-all significant differences on the Stanford Achievement Test Average Arithmetic scores between any of the four test periods. Figure 6 shows a graph of Arithmetic means to show the trend of those data.

FIGURE 6

GRAPH OF MEANS OF STANFORD ACHIEVEMENT TEST AVERAGE ARITHMETIC RAW SCORES COLLECTED FOUR TIMES



The arithmetic trend was nearly identical to that for reading, with an over-all lack of score change.

Hypothesis 13. There are significant differences in scores on the Children's Manifest Anxiety Scale between students when treated with a milieu consistency program and the same students when not so treated.

Hypothesis 14. There are significant differences in scores on the Children's Manifest Anxiety Scale between post-treatment testing and follow-up testing with the same group of students.

Hypothesis 15. There are significant differences in scores on the Children's Manifest Anxiety Scale between pre-treatment-post-control testing and follow-up testing with the same group of students.

Hypothesis 16. There are significant differences in scores on the Children's Manifest Anxiety Scale between pre-control and post-control tests with the same group of students.

An F ratio was computed for the means of the four administrations of the Children's Manifest Anxiety Scale. Table 15 shows means and standard deviations for the four test periods. Table 16 shows a summary table for the anxiety analysis of variance and the F ratio.

TABLE 15

TABLE OF MEANS AND STANDARD DEVIATIONS FOR CHILDREN'S MANIFEST ANXIETY TEST SCORES COLLECTED FOUR TIMES

	Mean	S.D.
Pre-control Test (1)	16.333	7.570
Pre-treatment Test (2)	13.667	6.649
Post-treatment Test (3)	13.200	7.574
Post-control Test (4)	10.667	7.656

TABLE 16

ANALYSIS OF VARIANCE SUMMARY TABLE FOR CHILDREN'S MANIFEST ANXIETY SCALE SCORES COLLECTED FOUR TIMES

Source	df	s.s.	m.s.
Treatments	3	242.533	80.844
Subjects	14	2871.933	205.138
Treatments X Subjects	42	390.467	9.297
Total	59	3504.933	
		F = 8.696*	

* significant at .05 level.

Since the analysis of variance test yielded significant results, it was meaningful to test each hypothesis by checking the differences between individual treatment means, employing the t test. Table 17 shows a table of differences for the anxiety treatment means, in which "A" denotes the computed difference between means.

TABLE 17

TABLE OF DIFFERENCES FOR CHILDREN'S MANIFEST ANXIETY SCALE TREATMENT MEANS

	A_2	A_3	A_4
A_1	2.666*	3.133*	5.666
A_2		.467	3.000*
A_3			2.533*

* significant at .05 level.

Hypothesis 13 is tested by reference to the difference between Means 2 and 3. That difference is not significant at the .05 level, even though it is in the expected direction. Hypothesis 13 is rejected. There are no significant differences in anxiety between the pre-treatment test period and the post-treatment test period.

Hypothesis 14 is tested by reference to the difference between Means 3 and 4. That difference is significant at the .05 level and is in the expected direction. Hypothesis 14 is accepted. There are significant differences in anxiety scores between the treatment test period and the post-treatment follow-up test period.

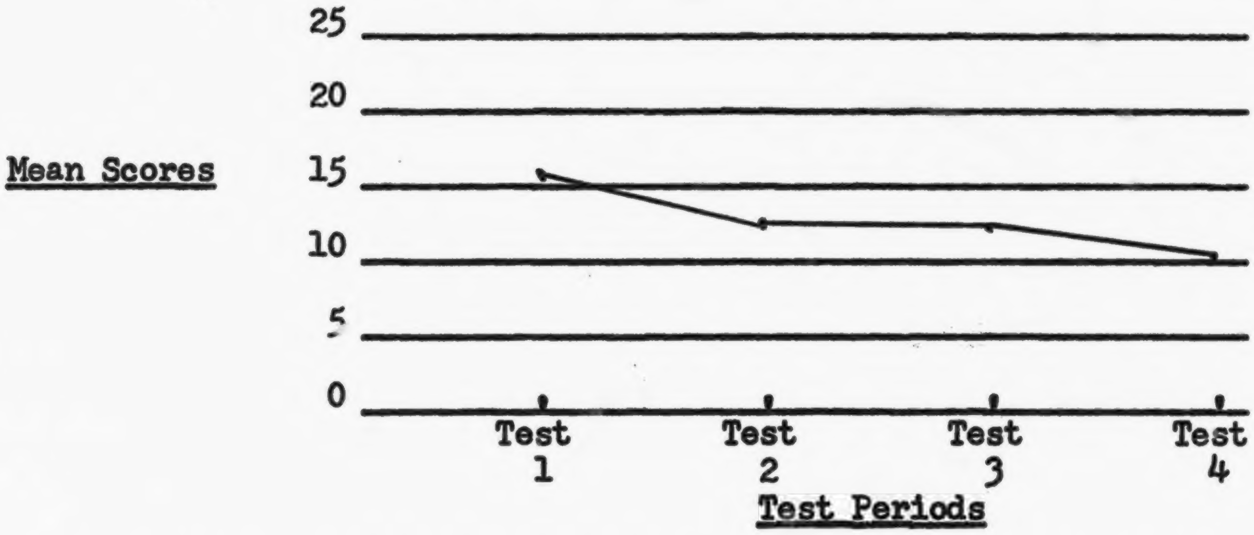
Hypothesis 15 is tested by reference to the difference between

Means 2 and 4. That difference is significant at the .05 level and is in the expected direction. Hypothesis 15 is accepted. Tested anxiety differences are significant between the pre-treatment test period and the follow-up test period.

Hypothesis 16 is tested by reference to the difference between Means 1 and 2. That difference is significant at the .05 level and is in the expected direction. Hypothesis 16 is accepted. There are significant differences in tested anxiety between the pre-control and pre-treatment test periods. Figure 7 shows a graph of the anxiety test means in order to show the trend of those data.

FIGURE 7

GRAPH OF MEANS OF CHILDREN'S MANIFEST ANXIETY SCORES COLLECTED FOUR TIMES



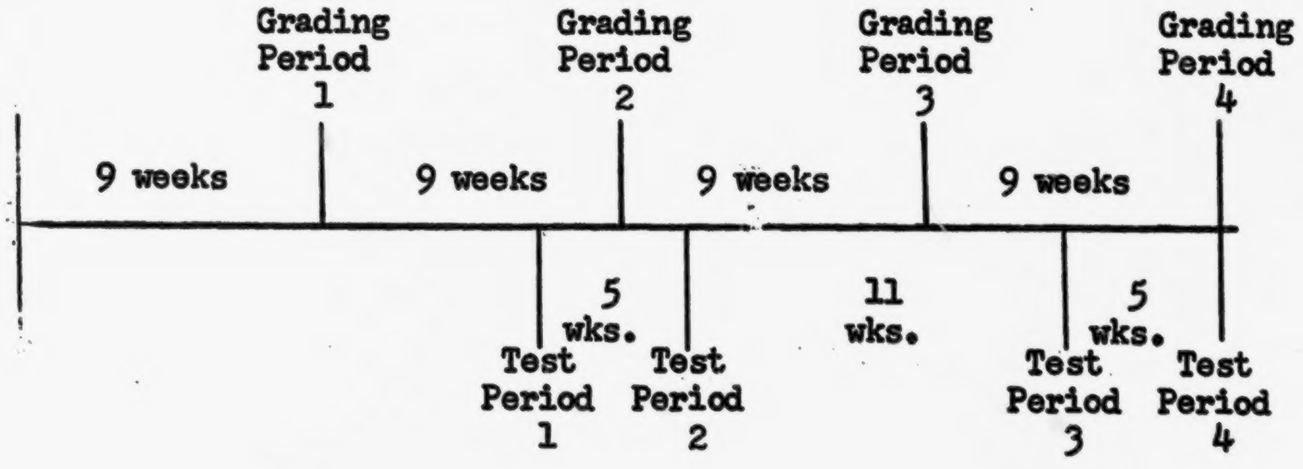
As was the case with the check list data, the anxiety trend is toward lessening anxiety, but the greatest change took place before treatment. Treatment apparently had no effect.

Additional Findings

In addition to check list-test data, teacher-given academic grades and marks in "effort" and "conduct" were recorded. Reporting periods occur four times in one academic year; as a consequence two grade reports were issued in near concurrence with the treatment/control periods of the study. However, there was some overlap, and effects cannot be directly attributed to the presence or lack of experimental conditions. Grading periods one and two were entirely independent of the study. Five of the nine weeks of grading period three were under "treatment" procedures as were five weeks of grading period four. The remaining weeks of grading period four were in the post-control period of the study. Figure 8 shows the above temporal relationships diagrammatically.

FIGURE 8

TEMPORAL RELATIONSHIPS BETWEEN SCHOOL GRADING PERIODS AND TREATMENT TEST PERIODS


Grading Period 1
Grading Period 2
Grading Period 3
Grading Period 4
9 weeks
9 weeks
9 weeks
9 weeks
5 wks.
11 wks.
5 wks.
Test Period 1
Test Period 2
Test Period 3
Test Period 4

With the above-stated limitations in mind, it would be possible to check the effect of the treatment, if any, on conduct, effort, and academic grades. The sign test was used to check for significance of any change in a positive direction in all three types of marks. Tables 18, 19, and 20 show those data and summarize the findings of the sign test.

TABLE 18

SUMMARY OF ACADEMIC GRADE POINT CHANGES OVER TIME WITH PROPORTIONS OF CHANGE IN POSITIVE DIRECTION USING SIGN TEST

	Grading Period			
	1-2	2-3	3-4	2-4
Number negative changes	9	4	9	4
Number no change	2	1	0	3
Number positive change	4	10	6	8
Proportion positive change	.27	.67	.40	.53

Needed for .05 significance (sign test)

N = 15
P = .74

TABLE 19

SUMMARY OF CONDUCT MARK CHANGES OVER TIME WITH PROPORTIONS OF CHANGE IN POSITIVE DIRECTION USING SIGN TEST

	Grading Period			
	1-2	2-3	3-4	2-4
Number negative change	9	3	7	4
Number no change	3	1	2	2
Number positive change	3	11	6	9
Proportion positive change	.20	.73	.40	.60

Needed for .05 significance (sign test)

N = 15
P = .74

TABLE 20

SUMMARY OF EFFORT MARK CHANGES OVER TIME WITH PROPORTIONS OF CHANGE IN POSITIVE DIRECTION USING SIGN TEST

	Grading Period			
	1-2	2-3	3-4	2-4
Number negative change	7	3	9	5
Number no change	3	1	2	2
Number positive change	5	11	4	8
Proportion positive change	.33	.73	.27	.53

Needed for .05 significance (sign test)

N = 15
P = .74

None of the proportions of positive change was significant at the .05 level. Academic grade and effort and conduct marks did not improve significantly at any point during the experiment. Figures 9, 10, and 11 show graphs of academic grades, conduct marks and effort marks respectively to show the trend of those data.

FIGURE 9

GRAPH OF ACADEMIC GRADE CHANGES OVER FOUR GRADING PERIODS

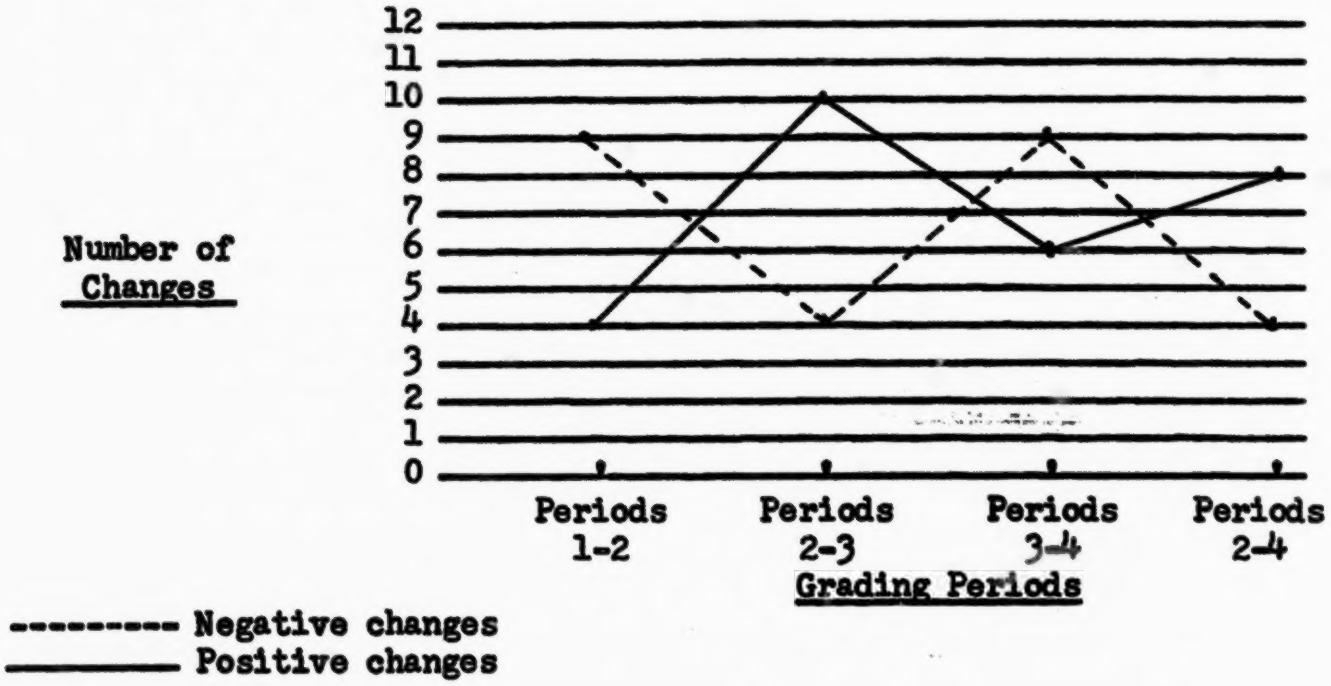
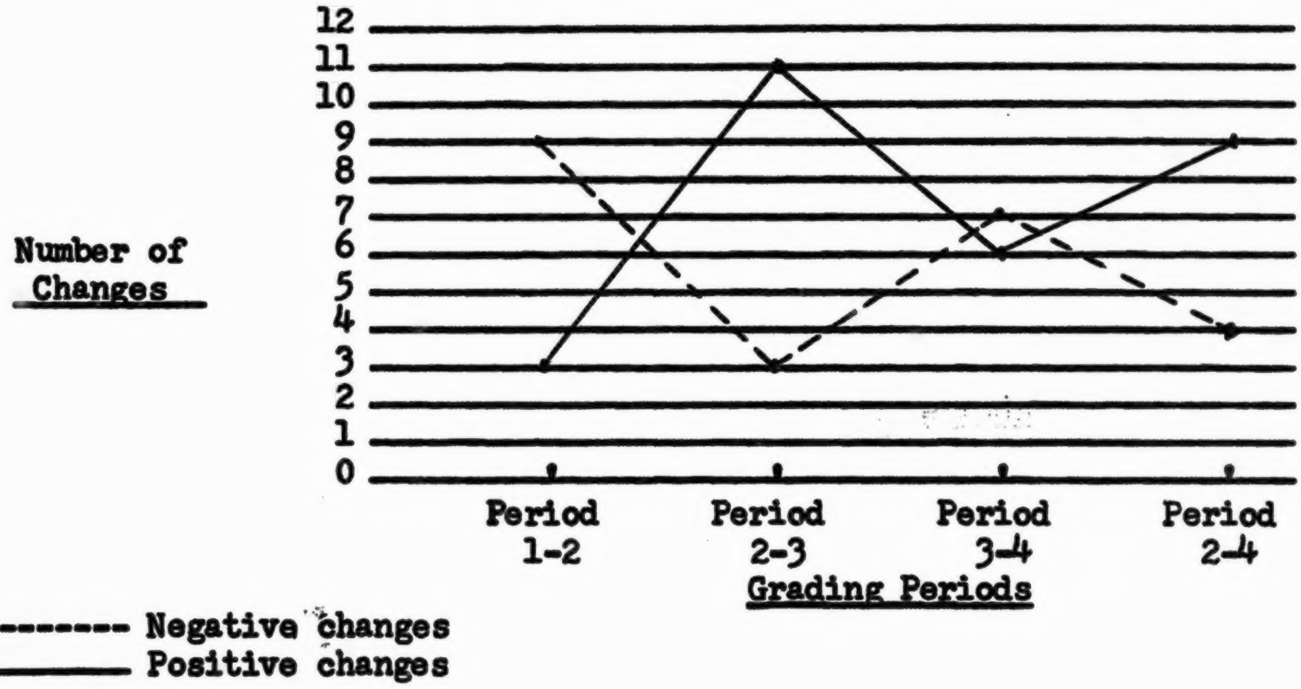


Figure 9 shows that academic grades tended to decline before treatment and improve during treatment, only to fall again when treatment ceased.

FIGURE 10

GRAPH OF CONDUCT MARK CHANGES OVER FOUR GRADING PERIODS

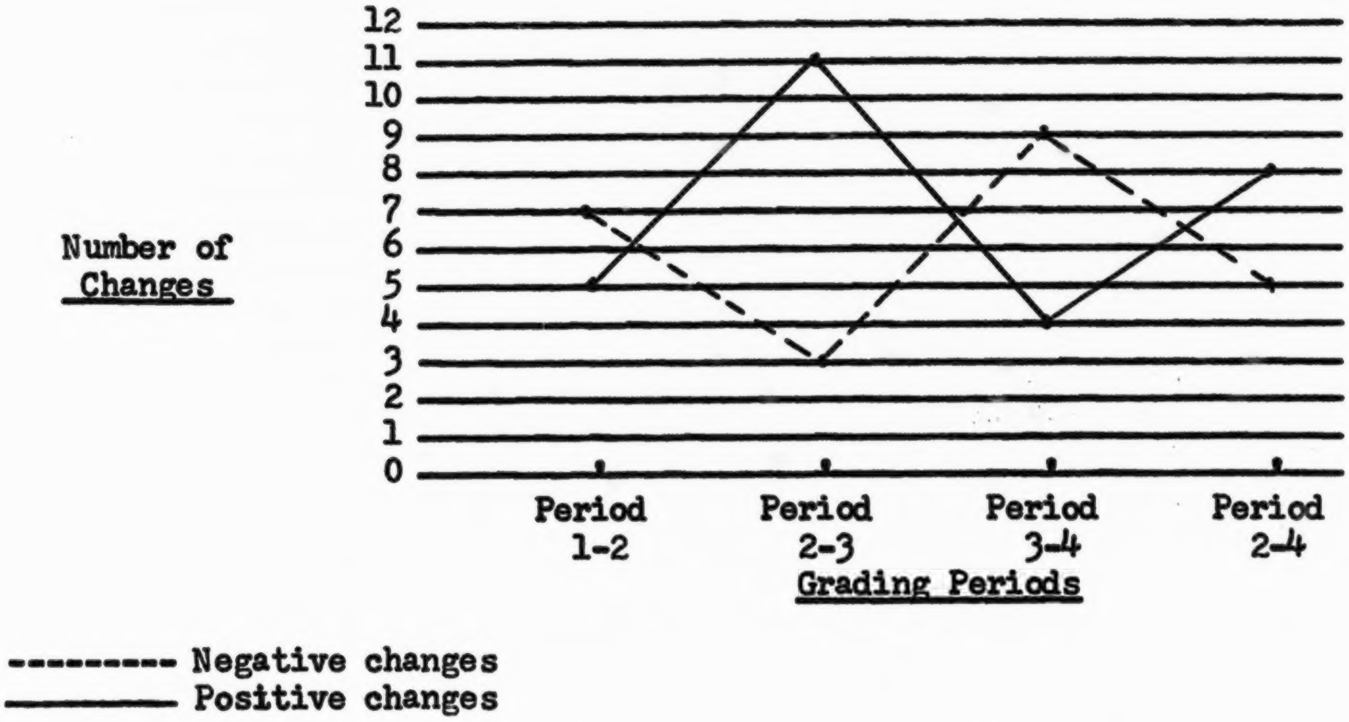


Conduct marks reflected a trend like that of academic grades, but with a larger number of positive changes and a smaller number of negative changes during treatment.

FIGURE 11

GRAPH OF EFFORT MARK CHANGES

OVER FOUR GRADING PERIODS



The treatment effect on effort marks was identical to that on conduct marks. Differences occurred in post-treatment changes.

In addition to data designed to test the effect of the treatment, *per se*, families were ranked for cooperation with the experimental program by the experimenter. Weekly rankings were averaged, and a grand cooperation rank was compared with corresponding child improvement. Child rank was based on relative negative change in the number of checks on the behavior check list between test period two and period three (end of control and end of treatment). The rank order correlation co-efficient between experimenter-judged parent cooperation and child check list improvement was +.04. That rank order correlation was not significant at the .05 level. Additionally, top and bottom quartiles were obtained by reference to absolute change on the check list. Neither the top nor the bottom quartile contained a disproportionate number of any school grade, indicating a lack of over-all teacher difference in administration of the treatment program. Table 21 summarizes that data.

TABLE 21

GRADE COMPOSITION OF STUDENTS IN TOP AND BOTTOM QUARTILES OF IMPROVEMENT

Grade	Top Quartile	Bottom Quartile	Total in Study
7	1	1	4
8	1	2	7
9	2	1	4

A further attempt was made to check the relationship between severity of the behavior problem and agreement between persons using the check list. Severity was defined as the number of checks on the check list when first completed. Rank order correlations were computed showing the relationships between mothers and fathers and combined parents and teachers in their use of the check list. Table 22 shows those correlation coefficients.

TABLE 22

RANK ORDER CORRELATIONS BETWEEN PERSONS USING BEHAVIOR CHECK LIST AND CHILD BEHAVIOR SEVERITY

Persons Checking Behaviors	rho
Mother - Father	.83*
Parents - Teachers	.45

* significant at .05 level.

The correlation between mothers and fathers is significant indicating that they agree concerning the relative severity of their children's behavior problems. Teachers and parents do not appear to agree.

Using the behavior check list as the criterion, behavior change was related to severity, using the rank order correlation. Further, the relationship of chronological age to both severity and age was checked by the rank order method. Table 23 summarizes those correlations.

TABLE 23

RANK ORDER CORRELATIONS BETWEEN BEHAVIOR SEVERITY AND BEHAVIOR CHANGE, AGE AND SEVERITY, AND AGE AND CHANGE

Factors	rho
Severity-Change	.15
Age-Severity	-.34
Age-Change	-.08

None of the rank order correlations is significant at the .05 level. The severity of the child's behavior problem is not related to his age. Neither is it related to his behavior change. Behavior change is not significantly related to chronological age.

Finally check list change was checked against the person using the check list. Rank change on the check list from time 2 to time 3 (treatment effect) was compared between mothers and fathers and between combined parents and teachers. Table 24 shows those rank order correlations.

TABLE 24

RANK ORDER CORRELATIONS BETWEEN PERSONS USING BEHAVIOR CHECK LIST AND CHILD BEHAVIOR CHANGE

Persons Using Check List	rho
Parent-Teacher	.44
Mother-Father	.34

Neither parents nor parents and teachers are in significant agreement concerning the relative behavior change of their treated children. Rank order correlations were not significant at the .05 level.

CHAPTER V

SUMMARY, DISCUSSION AND CONCLUSIONS

Summary

Purpose and Methodology

This study was an attempt to develop and adequately evaluate a treatment procedure designed to reduce the incidence of maladaptive behavior in public school classrooms. Relevant research was cited to describe the large need for trained personnel and facilities; neither was available in large enough quantity and quality to meet that need. Additional studies were cited to cast some doubt on the efficacy of traditional child mental health treatment methods.

The treatment program employed in this study was based on research which indicated that at least a major part of deviant behavior in children stems from environmental inconsistency--both from the child's home via his parents and from other areas of his "life space," including the school in which he spends a large amount of time. It was hypothesized that, given a program of unyielding home-school consistency into which were built logical consequences for both compliance and non-compliance, the maladaptive child would learn to operate within reasonable social limits, with a concomitant reduction of deviant acting-out behaviors, measured by a behavior check list. Additionally, the study attempted to ascertain whether or not academic achievement would improve while the child was subjected to the program, measured by the Stanford Achievement Test Reading and Arithmetic batteries. Finally, an attempt was made to discover whether or not the "inner state" of anxiety would change under the program, measured by the Children's Manifest Anxiety Scale.

Treatment consisted of investigator-developed written "programs" which scheduled as much as possible the lives of the treated boys. Behavior expectations and almost rigid structure were built into the life schedule as were consequences for both continued deviance and compliance. Teachers and parents were instructed in the use of the program and in the principles employed in its development. Daily contact was made with teachers and a minimum of once-weekly contact with parents in the home. These contacts were consultative in nature in that the child was not directly treated by the investigator, but worked with only through parent/teacher cooperation with the program instructions.

The general design of the study compared a group of behavior problem boys who were treated with the program with the same group when not so treated. Due to the study's reliance on milieu factors, a traditional control group was not deemed to be appropriate. School officials in a local junior high school nominated a treatment group from grades seven, eight, and nine which was screened for average or above intellect. All nominated boys were included who were of average intellect and whose parents would cooperate by giving oral permission and by completing a behavior check list. The treatment group of fifteen boys were evaluated, left alone for five weeks, evaluated again, treated for eleven weeks, evaluated a third time, and left without treatment for five weeks, followed by a final evaluation. Three different instruments were employed: The Behavior Classification Project Behavior Check List, the Stanford Achievement Test Arithmetic and Reading subtests, and the Children's Manifest Anxiety Scale. Additional data were collected concerning academic grades and teacher-assigned "effort" and "conduct" marks. Hypotheses were tested regarding behavioral, test, and teacher mark differences over time between the treatment period and both the pre-treatment and post-treatment periods.

Results

Differences Over Time Between Treatment and Non-Treatment Periods on the Behavior Check List. It was hypothesized that there would be significant differences in behavior checks for both parents and teachers between:

1. Initial evaluation and pre-treatment evaluation;
2. Pre-treatment evaluation and post-treatment evaluation;
3. Post-treatment evaluation and final evaluation; and
4. Pre-treatment evaluation and final evaluation.

For the combined check list analysis of variance, the F ratio was significant at the .05 level. Significance was also obtained for the teacher check list and parent check list analyses of variance F ratios. Due to the significant F ratios it was then meaningful to check the significance of differences between treatment (evaluation period) means.

The difference between means of initial evaluation checks and pre-treatment evaluation checks was significant at the .05 level with total, parent, and teacher check list means. The difference between means of pre-treatment and post-treatment evaluations was significant at the .05 level with the total check list and teacher check list means, but did not reach significance with parent check list means. The difference between means of post-treatment evaluation checks and final evaluation checks was significant at the .05 level in the case of total checks, but not significant with teacher or parent checks alone. A shift in direction of change was in evidence in that test; significantly more checks, rather than less checks were recorded with both teachers and the total check list, but not with parents alone. The difference between means of pre-treatment evaluation checks and final evaluation checks was significant at the .05 level with total and teacher means, but not with parent means.

Differences Over Time Between Treatment and Non-Treatment Periods on the Stanford Achievement Tests. It was hypothesized that there would be significant differences in both Reading and Arithmetic scores between:

1. Initial evaluation and pre-treatment evaluation;
2. Pre-treatment evaluation and post-treatment evaluation;
3. Post-treatment evaluation and final evaluation; and
4. Pre-treatment evaluation and final evaluation.

Raw scores were subjected to analysis of variance. Neither F ratio was significant at the .05 level, and a specific analysis of individual mean differences was not justifiable. Consequently, all hypotheses concerning differences on reading and arithmetic were rejected.

Differences Over Time Between Treatment and Non-Treatment Periods on the Children's Manifest Anxiety Scale. It was hypothesized that there would be significant differences in anxiety scores between:

1. Initial evaluation and pre-treatment evaluation;
2. Pre-treatment evaluation and post-treatment evaluation;
3. Post-treatment evaluation and final evaluation; and
4. Pre-treatment evaluation and final evaluation.

For the anxiety score analysis of variance, the F ratio was significant at the .05 level. Consequently it was then possible to check the significance of differences between treatment means.

The difference between the initial evaluation mean and the pre-treatment evaluation mean was significant at the .05 level. The difference between the pre-treatment and post-treatment mean was not significant at the .05 level. The difference between the post-treatment and final mean was significant as was the difference between the pre-treatment and final evaluation mean.

Differences Over Time Between Treatment and Non-Treatment Periods With Academic Grade Points, Conduct Marks and Effort Marks. Experimental conditions did not totally parallel school grading periods. However, there was some degree of concurrence, and ananalysis over time to check for effect was completed. It was hypothesized that there would be significantly more positive changes in academic grades, conduct marks, and effort marks while the students were involved in the consistency program than at any other time in the school year, and that positive shifts during treatment, if any, would not become negative shifts after treatment.

Using the sign test, no positive conduct, effort, or grade shifts occurred beyond that expected by chance at the .05 level. Conduct and effort marks shifted positively at a proportion nearly reaching that level of significance during treatment, only to fall again when treatment ceased.

Relationship of Parent/Teacher Program Cooperation to Child Success. The rank order correlation between investigator-ranked parent cooperation and check list ranked child success was not significant at the .05 level. Since boys in one grade usually were in classes of the same teachers at some time during the school day, top and bottom quartiles of check list change were obtained and these were checked for a disproportionate number of boys in any one grade. No such phenomenon was found.

Relationship Between Persons Using Behavior Check List and Child Behavior Severity. Rank order correlations were computed for absolute number of checks when the check list was first completed between mother and father and combined parents and combined teachers. Only the rank order correlation between mother and father was significant at the .05 level.

Relationships Between Behavior Severity and Child Success, Age and Severity, and Age and Success. Rank order correlations were computed to check for the relationship between relative rank of the boys on severity and their rank on success or behavior change, between relative chronological age and relative severity, and between relative chronological age and behavior change on the check list. None of the correlations was significant at the .05 level.

Relationship Between Person Using Check List and Child Behavior Change. Rank order correlations were computed for relative change of check list checks after treatment as related to the person using the check list. Neither the correlation between mother and father's use of the check list nor that between combined parent and combined teacher was significant at the .05 level.

Discussion and Conclusions

Pre-treatment Effects

The major criterion for this study was behavior change as measured by the Behavior Classification Project Behavior Check List. The hypotheses that the frequency of negative behaviors checked would vary as a function of the presence or absence of treatment were tested by employment of the check list as it was completed by parents and teachers. Change did occur; but the greatest check list change took place prior to the beginning of the treatment, during the pre-treatment control or baseline period. With the self-control design, the pre-treatment period was included to check for both random change and change simply due to being included in an experiment.

Although it is difficult to determine whether the baseline change was due to random environmental-personal factors, the magnitude of the change would cast doubt upon this conclusion. Rather, it is more likely that inclusion in a study was a factor of change, *per se*.

Apparently, a "Hawthorne effect" was in operation in this experiment (Roethlisberger and Dickson, 1939). The now-famous Western Electric studies attempted to alter employee production by environmental manipulation. Physical attributes of the work situation were altered (such as lighting and number and length of rest periods) in order to test their effects on production. The investigators found that not only did the trend of output go up as the conditions were improved, but they remained up when the conditions reverted to their former level, or even below it; and the upward trend continued too long to be ascribed merely to novelty. It was concluded that the experimental employees were motivated indirectly by an improved psychological environment. They were recognized as "special employees."

Certainly the boys included in the present study considered themselves to be "special students." Their parents were visited and questioned concerning behavior and habits; they, themselves were tested in groups and individually for a total of more than three hours (and taken out of regular class for that purpose). Their school teachers and administrators were asked to complete check lists concerning their behavior. Consequently, both to themselves and to those around them this group was "special." Some informal data are available to substantiate further an increase in status--at least before actual treatment plans were unveiled. The investigator was stopped in the hallway of the research school and literally begged by boys to be included in this study. Boys whose parents were hesitant in giving permission applied considerable pressure toward an affirmative answer; the same manifest eagerness to be in the study was observed in all cases even after treatment plans were unveiled and their restrictive nature was learned.

There was also an apparent interaction effect during the course of the experiment. The lack of change on both the Reading and Arithmetic subtests of the Stanford Achievement Test indicated that the program was unable to bring about such change, at least in eleven weeks. Although inspection of raw data showed a trend in the desired direction, differences were small. Stanford Achievement scores did not change during the pre-treatment period. Apparently, the feeling of being "special" was not sufficient to bring about this kind of change; achievement test scores were dependent only upon the boys, and not upon the perceptions of others. It is possible, therefore, that the Hawthorne effect evidenced in this study was an interaction between the special status felt by the boys with their consequent behavior change and the special status felt for the boys by adults with their consequent change of perception. It is also probably the case that the boys found it much easier to change their behavior as perceived by others than to bring up their achievement test scores. It must be remembered that the mean reading and arithmetic grade placement scores at the beginning of the study were 7.5 and 7.4 respectively. Further, several boys scored higher than their actual grade. These relatively high achievement scores would be difficult to improve upon regardless of the treatment program; the boys in the program were nominated as behavior disorders, not necessarily as achievement problems.

Grade, conduct, and effort marks, though teacher-assigned, depend in large part upon some ill-defined objective and subjective criteria.

Here again the treatment group did not change significantly before treatment. Although significant changes did not occur during treatment, inspection of Tables 18, 19, and 20 in Chapter IV shows that with all three types of marks, changes did take place and in a positive direction. To reach significance with the sign test, twelve of fifteen boys would have had to improve. In academic grades, ten improved; in conduct and effort marks, eleven improved. No such improvement proportions were in evidence during the pre-treatment control period. Simply feeling special was not enough to change teacher-given grades. Unlike the situation with the Stanford Achievement scores, these boys were low in grade point and in effort and conduct grades (mean grade point average was 1.69 on a four point scale). However, the study began after the current term began and although it is known that behavior does affect grading, teachers in the current study reported an attempt to keep grading as objective as possible. A better demonstration of the Hawthorne effect on grades would have been made had the study corresponded exactly to grading periods.

Finally, Children's Manifest Anxiety Scale scores also changed significantly during the pre-treatment period. Apparently, the Hawthorne effect on the children studied influenced their self-perceptions. The effect might have been larger had the boys not been so self-conscious in completing the Scale at the outset of the study. The questions took on less shock effect and the boys verbalized more trust of the confidentiality of results upon the second administration. As a consequence, the number of affirmative answers might have been greater the second time which may have lowered the total impact of the Hawthorne effect on anxiety scores.

The data collected after the baseline control period indicates that check list behavior and tested manifest anxiety change took place simply as a result of "feeling like special students." It is important to point out that the magnitude of both types of change was greater than any subsequent change, including that due to the experimental treatment. The implications of this finding for the treatment of behavior problem boys are large. If all children who are having troubles in school could be made to feel genuinely "special" their behavior might change--or at least the perceptions of those around them might be altered. It should be recalled that these were the worst male problems in the project school, as seen through the eyes of school administrators, teachers, and counselors. It should also be remembered that little, if anything, was being done about these children, other than sporadic disciplinary action or inconsistent "bawlings out;" those kinds of actions were "run of the mill" in this school. None of this group had been referred to an always-available University clinic for counseling or even evaluation. None of those in this group was the child of parents who expressed a large amount of concern about the child's behavior or school progress, or indicated interest in special assistance for their child.

It is also a possibility that the personality of the investigator had an effect prior to treatment. Although attempts were made to minimize personal contact with the boys prior to treatment, still the treatment group sought out the investigator at school and asked for more contact with him. With few exceptions these boys who normally could not be tested in a group setting cooperated with the investigator in group testing in such a way as to make such testing apparently valid. Severe testing problems were usually handled by the boys themselves with support from the investigator. Visits to the home were usually pleasant, with the boys requesting the experimenter to stay longer, visit their rooms, or interact with them more than the latter indicated willingness to do. Even during the most restrictive periods of the program, boys were usually anxious for the investigator to visit their homes and anxious to interact with him at school. The nickname "warden" was assigned to the investigator early in the treatment period, but was used almost affectionately. Other boys requested admission to the "prison" program.

Assuming the effects of the investigator to be true effects, the implications are large again. If the kind of minimal contact used in the initial pre-treatment periods of the study can bring about significant behavioral change, they should be employed with other behavior problem children. Certainly the effect of using only a portion of the students in the study could be duplicated by a counselor seeing only a portion of the students in one school. Counselor personality might well be a variable, but any counselor who could make the students feel "special" and "important" and even "worthwhile" might achieve the same results. In summary, these boys apparently were without significant amounts of positive, special attention. Their behavior changed at least in part as a result of increased status provided by inclusion in a research project by a university doctoral student and in part as a result of personal interaction with him. Further, the perception of adults around the child also seemed to change. Apparently, this perceptual change was due to increased status of the children and increased attention from the previously neutral or hostile school and from the investigator.

The reason for a behavioral change following a change in status is not entirely clear. Reports of the Hawthorne studies see evidence of a reciprocal effect: since the company does something for me (makes me special, cares, treats me right, wants to find out under what conditions I work best, etc.) I will do something for the company (work harder). In an analogous fashion, it follows that the subjects in the study felt the school, the home, and the investigator were suddenly interested in them, wanted to help them, etc., and consequently decided to try harder. Whether or not the new behavior maintains itself, it follows, depends upon whether or not the school, home, and investigator continue to express interest, to "care," etc. The Hawthorne studies found that employees continued to improve so long as conditions continued to be manipulated--the demonstration of continued interest. Such was the case in this study. Boys continued to improve so long as they were subjects under observation or treatment; the announcement of the termination of the program brought immediate regression, but still not to a level equal to or worse than that before experimental intervention.

A test of the Hawthorne effect would call for a control group. The self-control design employed in this study was able to control for nontreatment effects, but was unable to control for the unexpected Hawthorne effect. A control group probably should have been included, at least for the pre-treatment control period of the study, since milieu treatment factors were not involved during that time.

Treatment Effects

Significant behavior check list change did continue during treatment, although it was not as great as that which occurred prior to treatment. It would be difficult to explain the continued behavior change on any basis other than a continued Hawthorne effect. Certainly one could not legitimately claim any treatment effect with the present data. However, it is legitimate to ask why the Hawthorne effect did not increase with increased attention. After the beginning of treatment, the subjects were given large amounts of investigator attention and home/school concern. They were under almost constant supervision, were given special assignments of school homework and home chores, were behaviorally controlled by the school and by their parents, and were visited daily at school and weekly at home by the investigator. Why was not the behavior change larger under these conditions? Perhaps there is a diminishing effect of increased attention and status. That is, once the subject is included in an experiment, another change would be expected to change his behavior slightly, but the main effect was the initial inclusion. That was the finding of the Western Electric studies; that seems to be the case with the check list data. The treatment program did bring about some further positive change, but the main effect was already procured by inclusion in the study, testing, etc.

The fact that academic, conduct, and effort grades changed during treatment (although not significantly) but not during pre-treatment is probably a measure of when grades were issued rather than of the presence or absence of any possible Hawthorne effect prior to treatment.

Teachers could only express the change during grading period 3 which constituted the treatment grading period; the pre-treatment period 2 came just prior to the program initial evaluation. Unchanged Stanford Achievement Test scores might be attributed to their high level at the beginning of the study, as noted above.

Anxiety was unchanged during treatment. Apparently, scores on the Children's Manifest Anxiety Scale are affected by attention, status, etc. of a certain type: the attention provided by the treatment was of a high pressure type, and it is surprising that anxiety did not increase significantly during that period.

A central issue to which this study must now address itself is: Why was the treatment not effective? As predicted, initial parent interviews in which data were gathered regarding the consistency and structure available to the child at home revealed an almost total lack of environmental structure. Fewer than ten per cent of interviewed parents were able to name a regular dinner time; fewer than five per cent, a regular bed time for their son. Rules concerning dating, times to be at home, home chores to do, and at-home behavior were either too flexible to be of value or non-existent. An informal survey of non-behavior problem children in the same school revealed that their parents imposed a significantly larger number of rules and had significantly more structure in their family life than did those of the children nominated for this study. The home discipline of the treatment group was inconsistent, though usually punitive and arbitrary when administered. And school discipline was also inconsistent, with teachers and administrators sometimes letting misbehavior go unnoticed while other times "cracking down" for the same behavior.

Since the predicted lack of consistency and structure was in evidence, why was it that a program designed to reintroduce consistency and structure into the life space failed to bring about change? A logical answer would come out of data concerning the effectiveness with which the program was followed. It could be argued that if the program worked, it should have worked due to its logical, consistent execution by parents and teachers. No direct method was found to rate parent cooperation, and students in a given grade were almost all subjected to the same teachers. It was found that there was not a disproportionate number of any grade in either the top or bottom quartile of check list behavior change, indicating no relationship to teacher behavior on a group basis. Apparently, differences between teachers evened themselves out throughout the three grades involved.

Experimenter-ranked parent cooperation, based on weekly interviews, did not significantly relate to child check list behavior change. This means either that the experimenter was a poor judge of cooperation or that how well the parent followed the program made no difference to relative position in behavior change. Even extremes on both lists did not correspond; that is, the highest success children did not have parents who were ranked high in cooperation and vice-versa. A subjective impression by the investigator was that the program was being followed to a major extent. Spot checks on parents to see whether or not they knew where their child was and information reported by other boys in the study provided a fair method of assessment. Teachers were observed and talked to almost daily. There was variance in the degree to which the total program was followed by both teachers and parents, but the school "grapevine" indicated that the treatment rules were followed in most cases at most times. Despite the lack of consistency in the environment, apparently this method of a reintroduction of consistency into the environment is not effective beyond its providing attention, etc.

Differences between this study and those of other behavior therapists should be noted. Phillips' (1961) work on environmental modification also stressed the reintroduction of structure into the environment. However, Phillips worked out a separate program for each child, saw the child and parents in a clinic setting, and counseled one family at a time in a more traditional sense. Phillips did not attempt to train his parents to follow written instructions. His patients were referred to a clinic, and he used self-reports (of the parents) as the criterion for change. No control group was employed in his clinic work. The present study attempted to extend some of Phillips' ideas and apply them more impersonally and efficiently. In the present study, the therapist was not a therapist, but simply a consultant. It is possible that Phillips also had a Hawthorne effect. Wahler's (1965) study in which he trained mothers as "behavior therapists" for their own children, involved a sample of three. Each parent/child combination was worked with individually in a child guidance clinic. No effort was made to assess the generalizability of Wahler's results outside of the laboratory, and no control group was employed. Other studies cannot be found which attempted to condition the milieu of pre-adolescents in a group as large as the one used in the instant study. Neither can studies be found which employed the approach of teaching parents and teachers via written instructions, with the therapist acting only in a consultative and supportive role.

Limitations inherent in the behavior check list research technique are a factor in the negative results of the evaluation of this treatment procedure. With smaller numbers and more limited objectives, the direct observation/time sampling method might have been employed. The latter method would have ruled out the subjective perceptions of those using the check lists while still providing a check on observation reliability by using two observers. It would have provided an opportunity to observe systematically the use of the program by parents and teachers, enhancing the findings of the study. The high agreement found between parents concerning relative severity of their boys, however, increases the reliability of the check list. This relationship was not high between parents concerning behavior change nor was it high between parents and teachers on either factor. The correlation between parents concerning child behavior change, however, became much higher and attained significance when two parents were dropped who were in total disagreement. The fact that parents and teachers differed in their respective assessments of the same children need not indict the check list method; rather, it may simply mean that children act differently in different situations. It might be fruitful if a future research project investigated the relative efficiency of check lists as compared with direct observation in the assessment of behavior change.

It would appear that any future research in this specific area would need to control for the Hawthorne effect. One possible research design would involve evaluating the entire population of a given school as a pre-treatment control but treating only selected children. Future research might also begin with a smaller sample so as to evaluate better the method itself in addition to a more comprehensive evaluation of outcome using the method. Are written programs effective, for example? What is the optimal amount of time to be spent with parents and teachers to bring about change in behavior--both their's and the child's? The efficacy of tightly controlled behavior modification procedures is well-documented; the question remains concerning the extension of these procedures into the milieu of the subjects and to larger groups.

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APPENDIX A

BASIC PROGRAM - HOME

Name ______________________ Date Begun ____________________

Weekday

I. Arise: _____A.M.

Procedure: a. use own alarm clock if possible

b. call only once

Consequence for failure: earlier bedtime equal to number of minutes late getting up

Verbalization: (success): "Good, you got up on time. That shows responsibility."
(failure): "Since you could not get up on time you must need to get to bed earlier. We'll try that tonight and then see if you can be more responsible tomorrow."

II. Dressing and Personal Hygiene to be completed by _________A.M.

a. brush teeth

b. shave if necessary

c. shoes shined

d. clothing presentable

Consequence for failure on any of above: earlier rising next morning with an equally earlier bedtime that night (equal number of minutes)

Verbalization: (success): "Good, you got ready on time and you look really good this morning."
(failure): "Since you could not get ready on time this morning, you must mean that you need to get up earlier. We'll try again tomorrow to see if you can speed up. Since you're getting up earlier, you'll have to go to bed earlier, of course."

III. Breakfast: ____________A.M. (whether self or parent fixed)

Consequence for failure: earlier rising next morning with equally earlier bedtime that night, but no late breakfast (does not eat).

Verbalization: (success): "Great,_________! You got to breakfast on time. That was an adult thing to do."
(failure): "Sorry you did not choose to make breakfast on time. You can try again tomorrow by getting up earlier. Since you're getting up earlier, of course, you'll have to go to bed earlier tonight. You should be hungry by lunch."

IV. Straighten up room--to be done by _________A.M.

a. make own bed

b. pick up own clothes in room

c. all possessions in room in proper place

Consequence for failure on any of above: earlier arising next morning with equally earlier bedtime that night (equal number of minutes).

Verbalization: (success): "Thank you for straightening up your room, _____________."
(failure): "Since you did not find time to straighten your room this morning, you must mean that you need more time in the morning. You can get up earlier tomorrow and try again. Of course, that will mean an earlier bedtime tonight."

V. Leave for school at _________A.M.

a. child is not to leave before this time

b. child is to leave whether "ready" (according to him) or not

Verbalization: (success): "You were ready to leave on time. Good."
(failure): "You will have to go now regardless so you won't be late for school. Good bye."

Morning School Program

VI. Lunch

a. comes home for lunch

leaves school at _____________A.M.

arrives home by ______________A.M.

Consequence for lateness: does not get lunch

Verbalization: (success): Good, you were responsible enough to get home on time."
(failure): "Lunch was served on time. Sorry you did not make it, but you'll have a good appetite at dinner. Try again tomorrow."

leaves home at ________ P.M.

Is not to leave earlier and is to leave on time whether "ready" or not

Verbalization: same as above when leaving for school in morning

b. does not come home for lunch - school program.

Afternoon School Program

VII. Arrive home from school by ________ P.M.

a. check in with parent

b. wait for check call from parent at _________ P.M.

Consequence for failure: cannot go out for remainder of afternoon and next afternoon.

Verbalization: (success): "Good, you were responsible enough to get home on time. You may have some responsibility this afternoon now before dinner time."
(failure): "By choosing not to get home on time you must mean that you need someone to keep closer tabs on you. Today and tomorrow afternoon you'll have to stay in the house. We'll try again tomorrow and see if you make a better choice.

VIII. All boys take out garbage before dinner--to be done by _____ P.M.

Consequence for failure: no dinner fixed for him

Verbalization: (success) "You showed your familiy responsibility by taking out the garbage today. Thank you."
(failure): "Since you chose not to fulfill your family responsibility by taking out the garbage, you cannot expect things done for you by others in the family. You'll have to fix your own dinner tonight. See if you can do better tomorrow."

IX. Afternoon activities

a. work - M TU W TH F
to work at __________ P.M.

home from work at _____________ P.M.

Consequence for tardiness: cannot work the next day (see Verbalization VII above)

b. recreation - M TU W TH F

"rest period": ___________P.M. to _____________P.M. (no activity other than chores)

Consequence for no rest: no activity period (since needs rest)

"activity period": ________P.M. to _____________P.M. (with permission and with knowledge of where, who with, and what)

c. athletic practice - M TU W TH F - to be home by ____________ P.M.

d. pre-dinner clean-up ___________ P.M.

Consequence for no clean-up: no dinner

Verbalization: (success): "Thank you for cleaning up for dinner, ________."
(failure): "Since you cannot try to look presentable at the dinner table, you may not eat dinner. Perhaps you'd like to clean up tomorrow night."

Consequence for tardiness in recreation or athletic periods: staying in that day and that night and the next afternoon under supervision - (see verbalization VII above)

No Eating Between Meals All Afternoon

X. Dinner at _______________ P.M.

Consequence for lateness: no dinner

Verbalization: (success): "It was good that you got to dinner on time. That showed planning and responsibility."
(failure): "Dinner was served on time. Sorry you didn't decide to make it, but you'll have a good appetite tomorrow at breakfast. Maybe you'll choose to be on time tomorrow night."

XI. Post-dinner cleaning up activity - immediately after dinner

a. clear table

b. wash dishes

c. dry dishes

d. put away dishes

Activity is to be done without urging and argument by parent.

Consequence for failure: no evening recreational activity (in room without radio, instruments, etc.) until done--remains to be done for next day if necessary with boy eating from dirty dishes, etc.)

Verbalization: (success): "It was great to see you do the dishes, (etc.) tonite without being told. Thank you."
(failure): "You'll need to do the dishes before watching t.v. (going out, etc.), since responsibility comes before fun."

XII. Homework - immediately after finishing post-dinner cleaning up.

Place to be done: ______________________

To be done before evening recreation of any kind.

When boy says homework is completed, parents are to believe him and say: "Good, doing homework well will help you in school; We're glad you did it tonight. Now you can relax and watch t.v. (goof off, etc.)"

Homework should take 45-75 minutes daily.

Consequence for not having homework done is handled at school!!

XIII. Evening recreation time - after homework is completed

a. does not go out of house except with parent
or to: ______________________ on ________________________

then home by : _________________________ P.M.

Consequence if late: does not go next time

Verbalization: (success): "Since you chose to be on time, you may go next time."
(failure): "Since you chose to be late, you will have to miss next time, but will be able to try again the time after."

b. any in-home activity is acceptable

XIV. Bath or shower - to be completed before bedtime

XV. Bedtime at ________________ P.M.

Boy is to be ready (undressed, etc.) at that time; if not, he goes to bed without getting "ready" (clothes on, etc.)

Consequence for lateness, trouble, etc.: earlier bedtime next night.

Verbalization: (success): "Good, you got to bed on time. That showed good planning."
(failure): "Since you chose not to get to bed on time (fully ready), you must need more time. You will have to start 15 minutes earlier tomorrow night."

No post-dinner/pre-bedtime eating is allowed--only regular meals

Weekend

I. Friday night change

1. may go out (providing that he has no carry-over consequences from Thursday) to an organized activity

    a. parents are to know activity and place

    b. parents are to know with whom he goes

    c. chores are to be done before leaving

to be home by __________ P.M. (not to be picked up by parents)

Consequence for lateness: may not go out on next "go out" night

Verbalization (success): "I'm glad you showed you could be responsible by getting home on time. You may go out next time it is appropriate."
(failure): "Since you chose not to get home on time you must mean that you cannot be trusted out alone at night yet. You will not be able to go out next time it is appropriate, but can try again on the time after that."

II. Saturday morning and afternoon changes

1. Follow weekday routine as much as possible and try to keep notes of changes

2. Control of out of home recreation activity is maintained with boys always expected to

    a. be home for lunch and dinner on time

    b. be home within a set time limit

c. have all assigned chores done (including regular weekday chores)

d. let parents know where, what and who with

e. have no prior consequence interfering

Time for rising: ________________ A.M.

Chore - Saturday afternoon: ________________________

to be done by _____________ P.M.

3. Consequences for not following rules remain the same

III. Saturday night change

1. may go out if did not go out on Friday night (boy choses which one if possible) to an organized activity provided he has no carry-over consequences, as well as other conditions set for Friday night going out (see above).

IV. Sunday changes:

1. Church at ________________ A.M.; ___________ A.M./P.M.:

________________ P.M.

2. Other things are the same as for Saturday morning and afternoon.

Time for rising: ________________ A.M.

Friday's homework is to be completed Sunday night when schedule goes back to weekday

APPENDIX B

BASIC PROGRAM - SCHOOL

Teacher ________________ Subject(s) ____________________________

Students included (in order of period)

Behavior Expectations and Consequences

A. To be in classroom seat on time (upon last bell ringing)

Consequence: to stay after school the number of minutes late

Verbalization: (success): "Thank you, ______ for being in your seat on time."
(failure): "Since you chose to be late you'll need to stay after school ____________ minutes tonight to make up the lost time. I hope you'll do better tomorrow.

B. To have completed assigned homework at outset of class

1. to be turned into teacher without argument or urging
2. to be accurate and neat
3. to be fully completed
4. to be correct

Consequence: to go outside in hall, with desk, and complete assignment; then to spend the number of minutes outside after school.

Verbalization: (success): "Good! You got your homework done and it's right. That showed responsibility.
(failure): "Sorry you chose not to do your assignment. Please

go out in the hall and finish it before coming to class. Since you'll miss some class, you'll have to spend time after school making up today's in-class work. I'm sure you'll do your homework for tomorrow."

C. To conform to rules of classroom (talking without permission, causing noise, etc.)

1. No warnings are to be given ("If you do that again.....")

2. Behavior is deviant if teacher so decides

Consequences: to leave room with chair and sit in hall, working on class assignment for ten minutes. Time out will be made up after school.

Verbalization: (success): "______________, you've been doing well today. Keep it up." (at ten to fifteen minute intervals if possible)
(failure): "Since you chose not to behave in the group, you'll have to leave the group to get control of yourself. Try again in ten minutes. Of course you will miss ten minutes of class time and will need to make it up after school tonight."

D. To complete basic written assignments in class (same standards as with homework)

Consequence: to finish work after school

Verbalization: (success): "Thank you for turning in your work today, __________________; you're making pregress."
(failure): "Since you did not complete your class work for today, you'll need to stay after school to complete it. I hope you choose to do better tomorrow."

E. To conform to non-classroom school rules (fighting in halls, noise, etc.)

(same standards as with classroom behavior)--NO WARNINGS TO BE USED

Consequence: to sit in office for remainder of time of period (e.g. lunch) and the next day as well

Verbalization: (success): "You're doing very well today. Keep it up." (as often as possible by all staff)
(failure): "Since you have not chosen to behave acceptably in the group situation, you'll have to sit alone in the office until the bell rings today and sit there tomorrow, too. The next day when you're back in the group, maybe you'll try harder."

F. To remain in the school building at lunch time (providing does not go home for lunch)

Consequence: to sit in office during lunch time for day caught out of building and next day

Verbalization: (success): "I noticed you stayed in the school for lunch today. Good."
(failure): "Since you did not stay in the building for lunch today on your own you must mean that you have to be closely watched. You can sit in the office with your lunch today and tomorrow so the staff can watch you. Try again next time."

APPENDIX C

BEHAVIOR CLASSIFICATION PROJECT BEHAVIOR CHECK LIST

Name of Student: ______________________________ Date: __________

Person Checking Behavior: ____________________ Relationship________

DIRECTIONS: Place a mark beside those behaviors which you personally have observed in the past two weeks.

_____1. Turns up radio or TV higher than others do, asks for repetition of words, turns head toward sounds, etc.

_____2. Says "I can't do it," "I'm not any good at that," leaves task he fails (gives up easily).

_____3. Does not talk when spoken to (others say that he refuses to talk).

_____4. Bites nails, palms, or fingers.

_____5. Runs away from home.

_____6. Behaves like the opposite sex (boys wearing dresses, girls wrestling).

_____7. Declares "Others have it in for me," "People are always talking about me," etc. (others say he is suspicious).

_____8. Has pimples, rashes (skin trouble).

_____9. Writing cannot be read (writes poorly).

_____10. Says "I'm tired," "I want rest," etc. (others say that he tires easily or rests often).

_____11. Complains of pains in chest and of difficulty in breathing.

_____12. Cries out in sleep.

_____13. Writes words backwards ("mirror writing").

_____14. Repeats same acts over and over mechanically.

_____15. Says "I have so many ideas I can't sort them out," "Things keep running through my head," etc.

_____16. Falls, cuts, bruises, injures self (many accidents).

_____17. Seeks out younger children although children his own age are at hand (prefers to play with younger children).

_____18. Complains of pains in stomach.

_____19. Twists fingers, cracks knuckles, bites lips, etc. (nervous, tense).

_____20. Uses "dirty" speech.

_____21. Loses things.

_____22. Dawdles (dressing, bathing, feeding, etc.).

_____23. Does not answer when spoken to, pouts, looks "mean" (sullen).

_____24. Answers all questions about self with "I don't know," or fails to answer.

_____25. Reads poorly.

_____26. Eats nose pickings.

_____27. Tosses and turns in sleep, rolls, gets up often at night, etc.

_____28. Teases brothers and sisters.

_____29. Expresses fear concerning losing his mind, or "losing his grip" on himself.

_____30. Faints.

_____31. Finishes task last, asks for help, makes mistakes (learns slowly).

_____32. Others call him names, push and pick at him, laugh at him ("Picked on" by others).

_____33. Stays out later than permitted by parents or guardians.

_____34. Almost never smiles, often says "I feel sad," cries often (moodiness).

_____35. Muscles jerk frequently, eyes blink and squint often, body twitches.

_____36. Pulls, twists, chews at own clothes.

_____37. Enters others' homes without permission.

_____38. Complains "Nobody loves me."

_____39. Declares "I can do anything," "I'm pretty good," etc. (boasting).

_____40. Soils; nighttime.

_____41. Talks in Sleep.

_____42. Makes failing grades in arithmetic, makes mistakes with numbers, says he does not like arithmetic.

_____43. Complains of pains in "privates" (in the genital area, e.g., "My wee-wee hurts").

_____44. Uses "dirty" actions or gestures.

_____45. Shows signs of anger (red face, raised voice, etc.) in situations where others do not.

_____46. Stays largely in room or house.

_____47. Makes statements about wishing others ill ("I wish you were dead," etc.).

_____48. Children do not ask him to play or do not call him their friend.

_____49. Writes "dirty" things.

_____50. Vomits when things "do not go his way," when he shows signs of anger (red face, raised voice, etc.), when he says he is worried, or when he expresses feelings of sadness (becomes silent, cries, etc.).

_____51. Chatters, keeps talking or interrupting conversation (over-talking).

_____52. Complains of bad dreams.

_____53. States "I feel something dreadful is going to happen."

_____54. Clings to mother (stays close to mother, hangs on to dress or hand).

_____55. Says, "I don't have any problems," "Everything's all right."

_____56. Tells "whoppers," makes statements others deny believing.

_____57. Says "You like Billy more," "You gave him more than you did me," etc. (jealous).

_____58. Does not put things away in room, does not comb hair, does not dress orderly (untidiness).

_____59. Says "That's not so good," "So, that's not very important," "I don't believe it," "So what?" (belittles).

_____60. Tattles, "tells on" other children (e.g. says "Mother, Billy is sucking his thumb").

_____61. Complains of pain in rectal and/or bowel area (e.g., "My seat hurts," "It hurts to go to the toilet").

_____62. Talks continually about one thought or idea.

_____63. Claims to hear voices others say they cannot hear.

_____64. Quits or shows anger when loses (a "poor loser").

_____65. Is said by others to be too obedient.

_____66. Tells parents and others "You don't understand me."

_____67. Steals at home.

_____68. Has bowel movements with difficulty, uses laxatives more than others do.

_____69. Seeks out older children although children his own age are at hand (prefers to play with older children).

_____70. Says "I wish I were a girl".

_____71. Asks to be held or hugged, climbs in lap, etc. (seeks physical expressions of affection.)

_____72. Drops things, uses fingers clumsily.

_____73. Sets fires.

_____74. Has continual runny nose.

_____75. Wets: daytime.

_____76. Does not help out around the house.

_____77. Says "I don't feel good," "I'm too tired to go to school, or mow the lawn, etc." (makes excuses, avoids work or responsibility by alibi).

_____78. Does not play with other children.

_____79. "Talks back" to adults.

_____80. Says "Everyone picks on me."

_____81. Remains in one position for long periods, stares fixedly.

_____82. Makes everything "just right", always puts things in perfect order, washes and bathes very frequently (perfectionistic, too neat or clean).

_____83. Claims to see things others deny seeing.

_____84. At one time says "I'm feeling just wonderful, great, I'm on top of the world," and at another time "Life's not worth living, I'm terribly unhappy" (swings from extremes of happiness and sadness).

_____85. Becomes more active and/or more talkative in groups, becomes noisier and more excited than usual when he is in a group.

_____86. Expresses appreciation for others' acts.

_____87. Does not obey instructions or follow them when given by babysitters, teachers, or group leaders.

_____88. Withdraws, remains quiet, does not talk back when others shove, hit, or accuse or criticize him (does not "stand up for self").

_____89. Eats inedible objects (e.g., sand, wood, cloth, paper).

_____90. Destroys or defaces property.

_____91. Fights.

_____92. Does not try new situations, "hangs back" (considered by others as fearful or shy).

_____93. Says that he has no friends.

_____94. Stumbles, falls easily, throws clumsily.

_____95. Discusses own problems with others.

_____96. Expresses fear concerning losing temper, makes statements about avoiding anger.

_____97. Stays away from home.

_____98. Hurts animals.

_____99. Mutters (mumbles, makes low-voiced statements).

_____100. Declares self unable to feel pain, claims cannot smell or taste what others say they can, does not flinch when pricked, cut, or injured.

_____101. Speaks about God, "being filled with the Spirit," being Jesus' boy (very religious).

_____102. Maintains same facial expression ("poker face").

_____103. Moves constantly, "gets into everything," "swarms all over" (overactive).

_____104. Expresses hate for school (e.g., "I hate my teacher," or "I hate school").

_____105. Soils: daytime (bowel movement in clothes).

_____106. Screams more than others.

_____107. Speaks rapidly, words "come tumbling out fast."

_____108. Spends long periods of time on projects, takes up projects after intervening periods of time (perseveres).

_____109. Associates with children who are felt to be a bad influence.

_____110. Requests praise or approval.

_____111. Says "I'm no good," "I wish I were dead," etc. (self-condemnation).

_____112. Performs below demonstrated ability (does not work up to ability).

_____113. Drools.

_____114. Asks "What do I get out of it?" "What's in it for me?"

_____115. Vomits or reports bodily aches, headaches, stomach aches or feelings of nausea when changing residences or schools or when expecting visitors (upset by changes in routine).

_____116. Eats only certain foods, shows special likes and dislikes ("finicky" eating).

_____117. Walks in sleep.

_____118. Asks frequently "What will people say?" or "What will people think?"

_____119. Jumps from one activity to next, does not finish task (others say he has a short attention span).

_____120. Uses expressions like "Oh, my dear!" "How very, very, very lovely!", etc. (others say he has stilted or affected speech).

_____121. Does not participate in group activities, stays in background.

_____122. Shows possessions, talks about money, price, etc. (overconcern about material possessions).

_____123. Says "I won't go to school," skips or refuses to go to school without parents consent.

_____124. Trembles, shows spasticity, rigidities, etc. (muscle irregularities).

_____125. Expresses dissatisfaction with gifts, wants "more" (makes further demands).

_____126. Asks others to decide, does not make choices, hesitates a long time between choices (others say he has a hard time making decisions).

_____127. Shakes head, looks blank or puzzled, states "I don't know" when words he previously understood are spoken to him.

_____128. Swears or curses (uses "Hell," "damn," "God damn," and other four-letter words).

_____129. Demands "his share," "his rights," and complains of unfairness even when equal shares or privileges have been distributed.

_____130. Collects and hoards unusual (not collectors') items.

_____131. Has trouble pronouncing words, uses baby talk, lisps.

_____132. Sucks thumb.

_____133. Holds book closer to eyes than others do, frowns and squints looking at objects, rubs eyes often.

_____134. Expresses desire to "get ahead," to accomplish, to become great or famous.

_____135. Spends a great deal of time posing, looking at mirror, or playacting.

_____136. Blushes.

_____137. Turns away or pushes others away when expressions of affection are offered.

_____138. Spells poorly.

_____139. Expresses worry or concern about bad grades, health, etc. ("worry wart").

_____140. Mimics or imitates others' actions.

_____141. Argues.

_____142. Threatens to kill someone.

_____143. Leaves food without touching it, declines food.

_____144. Perspires excessively (more than others).

_____145. Complains of pains in head.

_____146. Bangs head in sleep (against bed).

_____147. Displays sex organs.

_____148. Does not perform before group, refuses to speak before class when requested, does not volunteer to speak or act before class or group.

_____149. Speaks, with weak voice, in a monotone, voice "trails off" at ends of sentences, or speaks in a weak, high-pitched voice.

_____150. Does not obey or follow direction of mother.

_____151. Repeats own or other's words (not just stuttering).

_____152. Obeys if threatened with punishment.

_____153. Follows the lead of other children, "goes along with the crowd."

_____154. Shows fear of certain everyday objects or situations.

_____155. Complains of pains in limbs and/or back (muscle aches and pains).

_____156. Shakes uncontrollably (convulsions).

_____157. Asks questions about sex, looks at sexual pictures, plays doctor or man-and-wife (overcuriosity about sex).

_____158. Whines.

_____159. Fails to carry out tasks (school assignments, etc.).

_____160. Attempts suicide.

_____161. Claims that some kind of machine is influencing his conduct.

_____162. Pulls at hands or clothes of adults, makes noises, etc. (annoys adults).

_____163. Stops talking while speaking, shakes head, frowns, or says "I can't remember" (others say that he seems to be "fishing around" for word or that he does not use word intended).

_____164. Has sexual intercourse.

_____165. Picks nose.

_____166. Comes late for meals, appointments, etc. (lateness).

_____167. Hits smaller children, "picks on" weaker or smaller children.

_____168. Disturbs others' property (not destructively).

_____169. Pulls other children's hair, pinches, steps on toes, etc. (annoys children).

_____170. Says "Others are to blame" for own actions.

_____171. States "I'll get even," "You won't get away with that," "I'll show him" (expresses desire for revenge).

_____172. Sings or hums continually (to the expressed annoyance of others).

_____173. Stares blankly into space.

_____174. Reports sad events without facial expression, or laughs or smiles at serious events (like a death in the family).

_____175. Cries at separation from mother (on going to school, camp, etc.).

_____176. Draws "dirty" pictures.

_____177. Pulls out own hair.

_____178. Says things that others say are very peculiar ("makes no sense").

_____179. Hurts other children (pinches, hits, kicks, or other destructive acts).

_____180. Screams, bangs objects when denied something (temper tantrums).

_____181. Makes statements contrary to fact (lying, telling untruths).

_____182. Talks about self repeatedly.

_____183. Smokes.

_____184. Wets: nighttime.

_____185. Reports difficulty in thinking (e.g., "I can't concentrate").

_____186. Steals outside of home.

_____187. Says "I'm afraid I'll hurt somebody," "I'm afraid I'll do something real bad," etc.

_____188. Corrects others repeatedly (criticizes or nags others, e.g., "You said 'ain't," "Use your fork").

_____189. Says "I'm sorry," "Won't you forgive me?" more than others do (expresses great remorse, apologizes repeatedly, cries after hurting or telling untruths).

_____190. Acts in ways others say are peculiar.

_____191. Plays with matches.

_____192. Grinds teeth.

_____193. Turns away quickly from what he is doing when something else moves, when someone speaks, or other sounds are made (distractible).

_____194. "Rocks" in bed.

_____195. Speaks with harsh, husky, or strained voice.

_____196. Handles own sex organs.

_____197. Makes silly faces and gestures (causing other children to laugh).

____198. Looks in windows or through keyholes at people undressing or dressing.

____199. Threatens suicide.

____200. Rushes off to do things before instructions are finished, "can't wait" (impulsive).

____201. Does not say "I'm sorry," or "Please forgive me" (expresses no regret or remorse by crying or speaking after hurting others, etc.).

____202. Teases other children.

____203. Cries or withdraws when teased.

____204. Hugs, kisses, says "I love you" to strangers.

____205. Eats often between meals, says repeatedly "I'm hungry," is fat.

____206. Becomes "jittery," builds up tension, becomes "wound up".

____207. Does not obey or follow directions or instructions from father.

____208. Stutters, stammers.

____209. Does not follow rules of games, schoolroom, etc. ("cheats").

____210. Answers slowly when others speak to him, moves head or body slowly (extremely deliberate and delayed action).

____211. Says "I feel things crawling on my arms or legs."

____212. Talks about or complains of nightmares about past serious events (divorce, auto accident, fire, loss of loved one, or other "crisis" events).

____213. Accepts other children's "bossing."

____214. Does not mind or obey until physically punished.

APPENDIX D

LIFE-SPACE INTERVIEW FORMAT

Weekdays

A.M.

1. What time does your son arise?
2. What time does he eat breakfast? Who fixes it?
3. What time does he leave for school? With whom?
4. What are his responsibilities at home before school?
5. What time does he arrive at school? What time does school begin?
6. How does he get to school?
7. Does he eat lunch at school? At home?

   If at home, what times does he arrive, leave? With whom?
8. Are you home during lunch period?

P.M.

1. What time does your son arrive home from school? Are you there?
   - a. Is he in athletics? What time is practice over?
   - b. Is he in other after-school activities? What time are they over, what are they, and what days do they meet?
2. What does he do after school (at home) before dinner?
3. What are his responsibilities at home after school?
4. Does he have after-school employment? What, where, when?
5. What time is dinner served? Who fixes it?

6. What are his responsibilities after dinner?
7. When does he do his homework? Where, with whom?
8. What other activity occupies him during evening hours?
9. Can he leave home in the evening? Where and when expected home?
10. When is his bedtime? When does he bathe, etc.?

Weekend - A.M. and P.M.

Questions for weekdays are asked in addition to:

1. What is his morning activity? Where, when, with whom?
2. When is lunch? Who fixes it?
3. What is his afternoon activity? Where, when, with whom?
4. Does he go out Friday, Saturday nights? Where, when, with whom, how often, when is he expected home?

General Questions Asked Concerning Discipline:

A. What do you do when your son is not home on time: from school, from a date, for dinner?

B. What do you do if he "talks back" to you? To others?

C. Who are your son's friends?

D. What do you do if your son fails to complete an assigned task?

E. What do you do when he brings home a poor report card, a good report card?

F. What are your son's hobbies and interests?